The Hashemite Kingdom of Jordan

Small-ruminant Investments and Graduating Households in Transition (SIGHT)

الاستثمار في المجترات الصغيرة وانتشار الأسر الريفية من الفقر

Final Design Report

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Working Papers

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Currency equivalents

Currency Unit = JD
US$1.0 = 0.712 JD

Weights and measures

1 kilogram = 1000 g
1 000 kg = 2.204 lb.
1 kilometre (km) = 0.62 mile
1 metre = 1.09 yards
1 square metre = 10.76 square feet
1 hectare = 2.47 acres
1 acre = 0.405 hectare
1 hectare = 2.47 acres
1 dunum = 1000 m²
Abbreviations and acronyms

ACC  Agricultural Credit Corporation
ACSAD Arab Centre for the Studies of Arid Zones and Dry Lands
AWPB Annual Work Plans and Budget
CBO Community Based Organization
CBJ Central Bank of Jordan
CC Climate Change
COSOP Country Strategic Opportunities Project
CPE Country Project Evaluation
DAs Designated Accounts
DANIDA Danish International Development Agency
DEF Development and Employment Fund
DOS Department of Statistics
EBRD European Bank for Reconstruction and Development
EIRR Economic Internal Rate of Return
ERR Economic Rate of Return
EU European Union
FAO Food and Agriculture Organisation
FARMS Facility for Refugees, Migrants, Forced Displacement and Rural Stability
FDI Direct Foreign Investment
FSP Financial Service Providers
FSTs Farmer Support Teams
GCC Gulf Cooperation Council
GDP Gross Domestic Product
GI Geographical Indication
GID Genetic Indication Division
GTD General Tender Directorate
GEF Global Environment Facility
GFMIS Public Expenditures and Accounting Information System
GIZ German Cooperation Agency
GNI Gross National Income
GoJ Government of Jordan
GSD General Supplies Directorate
HDI Human Development Index
HH Household
HIES Household Income & Expenditure Survey
ICARDA International Centre for Agricultural Research in the Dry Areas
IFAD International Fund for Agricultural Development
ILO International Labour Organization
IMF International Monetary Fund
IOE IFAD Independent Office of Evaluation
IUCN International Union for Conservation of Nature
The Hashemite Kingdom of Jordan  
Small-ruminant Investments and Graduating Households in Transition (SIGHT)  
Final Design Report

<table>
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<tr>
<td>JD/JOD</td>
<td>Jordan Dinar</td>
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<tr>
<td>JCC</td>
<td>Jordan Cooperative Corporation</td>
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<td>JEDCO</td>
<td>Jordan Enterprise Development Corporation</td>
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<td>JPD</td>
<td>Joint Procurement Directorate</td>
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<td>JOHUD</td>
<td>Jordan Hashemite Fund for Human Development</td>
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<td>JUST</td>
<td>Jordan University for Science and Technology</td>
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<tr>
<td>JV</td>
<td>Jordan Valley</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
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<tr>
<td>MENA</td>
<td>Middle East and North Africa</td>
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<td>MFI</td>
<td>Microfinance Institution</td>
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<td>MFTs</td>
<td>Mobilized Field Teams</td>
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<td>MoA</td>
<td>Ministry of Agriculture</td>
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<td>MoE</td>
<td>Ministry of Environment</td>
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<td>MOF</td>
<td>Ministry of Finance</td>
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<td>MoPIC</td>
<td>Ministry of Planning and International Cooperation</td>
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<td>MoSD</td>
<td>Ministry of Social Development</td>
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<td>MoT</td>
<td>Ministry of Trade</td>
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<td>MoTA</td>
<td>Ministry of Tourism and Antiquities</td>
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<td>MPWH</td>
<td>Ministry of Public Works and Housing</td>
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<tr>
<td>MSME</td>
<td>Micro, Small and Medium Enterprises</td>
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<tr>
<td>MTR</td>
<td>Midterm Review</td>
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<tr>
<td>MWI</td>
<td>Ministry of Water and Irrigation</td>
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<tr>
<td>NAF</td>
<td>National Aid Fund</td>
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<tr>
<td>NAIS</td>
<td>National Animal Identification System</td>
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<tr>
<td>NCARE</td>
<td>National Centre for Agricultural Research and Extension</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>NRM</td>
<td>Natural Resource</td>
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<tr>
<td>NSAD</td>
<td>National Strategy for Agriculture Development</td>
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<tr>
<td>ODA</td>
<td>Official Development Assistance</td>
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<tr>
<td>ONBP</td>
<td>Open Nucleus Breeding Programme</td>
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<tr>
<td>PBAS</td>
<td>Performance Based Allocation System</td>
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<tr>
<td>PEFA</td>
<td>Public Expenditure and Financial Accountability</td>
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<tr>
<td>PET</td>
<td>Potential Evapotranspiration</td>
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<td>PFM</td>
<td>Public Finance Management</td>
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<td>PMU</td>
<td>Project Management Unit</td>
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<td>PPR</td>
<td>Peste des petits</td>
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<tr>
<td>PRS</td>
<td>Poverty Reduction Strategy</td>
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<tr>
<td>PSC</td>
<td>Project Steering Committee</td>
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<td>PTCC</td>
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<tr>
<td>RBG</td>
<td>Royal Botanic Garden</td>
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<td>REGEF</td>
<td>Rural Economic Growth and Employment Project</td>
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<td>RFF</td>
<td>Rural Finance Fund</td>
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<td>RIMS</td>
<td>Results and Impact Management System</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>SA</td>
<td>Special Account</td>
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<td>SAI</td>
<td>Jordan Audit Bureau</td>
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<tr>
<td>SCG</td>
<td>Saving and Credit Group</td>
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<td>SIGHT</td>
<td>Small Ruminant Investment and Livelihood Improvement Project</td>
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<td>SME</td>
<td>Small and Medium Enterprises</td>
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<td>SOE</td>
<td>Statement of Expenditure</td>
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<td>SRAP-WA</td>
<td>Sub-region Action Program to Combat Desertification in WA Region</td>
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<td>SWC</td>
<td>Soil and Water Conservation</td>
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<td>TA</td>
<td>Technical Assistance</td>
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<td>TNC</td>
<td>Third National Communication</td>
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<td>TSA</td>
<td>Treasury Single Account</td>
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<td>UNDP</td>
<td>United Nations Development Project</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>USD</td>
<td>United States Dollar</td>
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<td>USAID</td>
<td>United State Agency for International Development</td>
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<td>VC</td>
<td>Value Chain</td>
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<td>WB</td>
<td>World Bank</td>
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<td>WEF</td>
<td>World Economic Forum</td>
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<td>WUA</td>
<td>Water Users Association</td>
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Map of the Project area
Executive Summary

Introduction

1. The International Fund for Agriculture Development (IFAD) conducted a Final Design Mission for the Small ruminant Investments and Graduating Households in Transition Project (SIGHT) from 3 to 14 June 2017 on the request of the Government of Jordan. The purpose of the mission was to design a project in keeping with the Government's strategic priorities with respect to Jordan Economic Growth Plan (JEGP) 2018–2022 to recapture the growth momentum and assist the country in achieving a 5% growth rate in GDP by focusing on growing the agriculture sector. Within the agriculture sector, the livestock sector constitutes the major share of agriculture output (55%) and also contributes significantly to the national income from exports and is critical for food security and poverty alleviation. The small ruminant sector constitutes 32% of the livestock sector and is the most important sector for the poor rural communities in the Badia. An analysis of the self-sufficiency ratio for meat products in the country indicates that the overall self-sufficiency ratio for all meats is low and animals and animal products amount to 39% of the total value of imported foods. The value of imports is further expected to increase due to the increases in population and increase in demand for meat. A market assessment of small ruminants confirms the well-established market channels for small ruminant products.

2. Growth in the agriculture sector also requires access to finance. However, lack of specialized agricultural finance products is an issue in Jordan. Though the country has a strong and capable banking and microfinance sector, agricultural lending has not been a priority either for banks or MFIs as agriculture has been traditionally perceived as highly risky and an unprofitable business. Accordingly, banks and MFIs have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance products. Only about 3% of banks’ and 1% of MFIs’ loan portfolios are in agriculture; but both banks and MFIs are interested in exploring this new area for them. Some rural households are also reluctant to borrow given their apprehensions that these loans may not be Sharia compliant. However, Islamic finance products are now available in the financial markets and could be directed to these households. The current project presents an opportunity to build the confidence and risk appetite of commercial banks for the agriculture sector through the Central Bank of Jordan which has secured agreement with commercial banks to provide low interest rate loans which are guaranteed by the Jordan Guarantee Corporation.

3. The proposed project design also capitalises on the opportunity to support the Jordan Response Plan for the Syria Crisis and has integrated into the design, components which can assist Syrian refugees and their host communities to graduate out of poverty through a package of livelihood support, training, job placement and asset creation for addressing issues of food security and building resilient livelihoods. This is all the more critical given that the Syrian crisis has disrupted trade and caused a large influx of refugees, straining public services, finances, and labour market conditions in Jordan and continues to exert significant pressure on host Governorates and communities. IFAD will utilise the funds from the Facility for Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) and also mobilise additional resources for the purpose.

Proposed Project

4. **Project goal and objective.** The project will be implemented over a 6-year period. The development goal of the Project is to contribute to reducing poverty and enhancing national

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1 Mission composition: Mr. Rami Abu Salman (IFAD Country Programme Manager), Mr. Vrej Jijyan, (IFAD Programme Officer), Ms. Maliha Hamid Hussein (Mission Leader and Rural Development Specialist), Ms. Wafaa El Khoury, (IFAD, Lead Advisor, PTA), Ms. Shazreh Hussain,(Poverty, Gender and Targeting Specialist), Dr. Faisal Awawdeh (Livestock Specialist), Ms. Olga Tomilova (Rural Finance Specialist), Ms. Agnese Tonnina (Economic and Financial Analyst), Mr. Malek Sahli (IFAD Senior Finance Officer, FMD), Mr. Pedro Regato Pajares (Environment and Climate Change Specialist), Mr. Walid Dhoubi (Procurement Specialist), and Dr. Saeb Khresat (IFAD Country Presence Officer).
food security in Jordan by improving the productivity of small-ruminants and to assist Syrian Refugees and host communities to graduate out of poverty through a package of livelihood support. The project title “Small-ruminant Investments and Graduating Households in Transition” (SIGHT) reflects this dual focus of the project.

5. The proposed project will help to build the capacity of the public sector to provide improved breeds of small-ruminants, strengthen the capacity for managing quarantine facilities, strengthen the system for traceability of animals as well as assist the Government in developing Geographical Indication for Awassi Sheep to build Jordanian brand recognition. The project will strengthen public and private sector extension and animal health services, assist in exploring alternate and innovative feed resources, pilot test improved rangeland management practices for small ruminants in close collaboration with communities, cooperatives and individual entrepreneurs. The project will increase access to finance for rural and agriculture households through the commercial banks and MFIs. The project will also capitalise on the opportunity for attracting grant resources for improving the livelihoods of Syrian refugees and host communities, particularly women and youth, through piloting a comprehensive graduation approach in the country for the first time.

6. Project area and Target group. The project will be implemented in the six northern and central Governorates of Mafraq, Irbid, Jerash, Ajloun, Madaba and the outskirts of Amman. However, the institutional and technical support will target the public services in all governorates of Jordan. The primary target group of SIGHT will be Jordanian women and men who are small-holder livestock farmers for whom small ruminants are a source of income, food security and a safety net. The poor and extreme-poor Jordanian rural host community households and Syrian Refugees will also be an important target group with a special focus on women and youth.

7. Benefits and Beneficiaries. The project will benefit 11,920 households of whom 2025 will be Syrian Refugee households. The overall economic internal rate of return (EIRR) of the project is estimated at 26% for the base case. The net present value (NPV) of the net benefit stream, discounted at 10%, is USD 50.4 million. Sensitivity analysis was conducted to show the resilience of the project to various scenarios of increased costs and reduced benefits.

Project Components

8. The SIGHT Project will consist of two main components: (i) Investment in Farmer Services; and (ii) Livelihood Investments and Access to Financial Services. The first component will support the public and private sector to ensure that small ruminant producers receive a set of complementary services that are needed to enhance the efficacy of small-scale livestock production systems and the incomes of the smallholders. The project will strengthen the Government animal breeding and health services through selected investments in infrastructure and capacity building. Under this sub-component, investments will be made to support the following areas; (i) sheep and goat breeding stations; (ii) Geographical Indication (GI) for Jordanian Awassi sheep; (iii) diagnostic animal health laboratories; (iv) quarantine and certification facility; and (v) enhanced system for animal identification and inclusion in the farm registry system.

9. The second component will provide support to households at different gradients along the poverty spectrum. This includes the Jordanian host communities and highly vulnerable Syrian Refugees, as well as individual entrepreneurs in need of loans for their enterprises. The project will graduate the extreme poor and poor households out of extreme poverty to a more stable state. This approach provides beneficiaries with a holistic set of services including: consumption support, savings plans, livelihood trainings, vocational training, job placement, productive asset transfers, etc. By investing in this multifaceted intervention, the project will strive to eliminate the need for long-term safety net services. The target group of the graduation sub-component will be the Jordanian host communities and Syrian refugees. In addition, financial services will be provided for small-holder farmers and young men and women who have the risk appetite and capacity for micro and small enterprises to initiate or expand agricultural businesses and off-farm activities.
10. The SIGHT project will provide financial services through CBJ, which will provide the loans through commercial banks, including Islamic banks offering Sharia-compliant products, which are demanded by many of the potential target beneficiaries, as well as eligible MFIs. The Jordan Loan Guarantee Corporation is expected to provide access to the guarantee facility to potential borrowers under an existing arrangement with the CBJ, which the project will use for its beneficiaries. Average interest rates on bank loans to the end beneficiaries will range between 4 and 6 percent per annum. The facility is designed to encourage commercial banks and MFIs to view loans to the livestock sector and rural entrepreneurs as a viable business opportunity and use their own funds eventually to lend to this sector.

Costs and Financing

11. Over the six-year period, the total project cost is estimated at USD 23.991 million including price and physical contingencies. The project will be financed by an IFAD loan of USD 8.4 million, an IFAD grant of USD 0.5 million. The Facility for Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) will co-finance the project with a grant of around USD 3.9 million. There is a financing gap of USD 6.5 million, which IFAD will try to address by mobilizing additional grant resources from co-financiers through FARMS. The Swiss Development Cooperation has pledged an amount of USD 2.5 million as a contribution to this financing gap – IFAD will receive confirmation by mid-July. The Government’s in kind contribution is estimated at USD 4.690, which is equivalent to 24% of the financing from IFAD and FARMS and almost 50% of the cost of component 1. Government contribution includes the use and maintenance of public sector facilities (breeding stations, quarantine facilities, diagnostic laboratories, etc.) staff time as well as taxes and duties foregone.

12. There is a financing gap of USD 6.5 million, which IFAD will try to address by mobilizing additional grant resources from co-financiers through FARMS. The financing gap will not impact the core activities of the project as the financing has been structured in such a manner that if additional financing can be mobilised it will be used to provide support to 2,600 women and youth from among the Syrian Refugee families and host communities to enable them to graduate out of poverty through concentrated support.

Project Management Arrangements

13. The project implementation arrangements have been designed in a manner that will strengthen Government capacity for implementation of the project for long-term sustainability. The main agencies implementing the project will be existing government departments and agencies with the mandate to undertake the specific tasks assigned to them. Service providers and NGOs will only be used in their area of expertise and will work in close cooperation with the Government. The project also builds on the concept of *public-private partnership* in keeping with overall Government policy for developing new and innovative implementation modalities in the design and implementation arrangements of the project.

14. The Ministry of Agriculture (MoA) will be the implementing agency responsible for the implementation of the SIGHT project. The PSC established at the MoA to guide all agriculture related internationally financed projects will also act as the Steering Committee of the project. The day-to-day management and implementation of the project will be performed by a dedicated Project Management Unit (PMU) that will be established within the MOA premises in Amman. Short-term technical expertise will be used as and when required from the existing pool of specialists from MOA, NCARE, and various universities. As needed, recruitments from the private sector, will be based on TORs prepared by the PMU and approved by IFAD. The Directorates of Agriculture in the target Governorates will be involved in supporting implementation of specific activities based on their geographic locations which will be detailed in the Project Implementation Manual.
## Logical Framework

<table>
<thead>
<tr>
<th>Results Hierarchy</th>
<th>Indicators</th>
<th>Means of Verification</th>
<th>Assumptions (A) / Risks (R)</th>
</tr>
</thead>
</table>
| **Goal:** To contribute to reduce poverty and enhance national food security in Jordan. | • % of population below the international poverty line. | | ▪ Political stability Marco-economic conditions remain stable or improve.  
▪ Elite capture of project activities without benefits to the rural poor. |
| | Overall, 33% of the population in Jordan experience poverty during at least one quarter of the year. 25% reduction of poverty for targeted households | DoS and HIES Surveys. Mid-term and Completion Surveys  
MTR and completion  
PMU M&E unit | |
| **Development Objective:** To increase the income of around 11,920 vulnerable households through providing sustainable production capacity. | • Percentage increase in net income of vulnerable households targeted by the project. | | |
| | JoD 285 average income of targeted HH. 30% increase in net income for targeted households | Mid-term, Annual Outcome and Completion Surveys  
MTR and completion  
Project Director and M&E of officer | |
| **Component 1: Investment in Farmer Services.** | • Number of households reporting adoption of new breeding practices. | | |
| **Outcome 1:** Strengthened public and private sector capacity to enhance productivity of smallholder livestock farmers, increase incomes and build resilience. | 0  
2,200 households | Government Stations & DDA records  
Annual Outcome Surveys  
Annually  
M&E officer  
Component officer | |
| | • Number of households reporting an increase in productivity | 4,630 households  
60% of the targeted beneficiaries under this component (at least 1,500 women) | |
| | 0  
1,800 households | Government Stations & DDA records  
Annual Outcome Surveys  
Annually  
M&E officer  
Component officer | |
| | • Number of new regulations and policies proposed for approval | TBD at project start up  
TBD at project start up  
Ministry of Agriculture National Advisory Group  
MTR and completion  
Project Director | |
| **Outputs:** | • Number of rural producers accessing production technological packages | 7,720 (at least 30% women)  
M&E system Component reports  
Annually  
M&E officer Component officer | |
| 1.1 Enhanced | 0  
2,500 | | |
## Results Hierarchy

### Productivity in the Small Ruminant Stock without Increasing the Number of Animals

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Means of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish a registry system of the genotyping of the Jordanian Awassi sheep</td>
<td>A registry system established</td>
</tr>
<tr>
<td>Develop a Road Map for the trade mark/registry system of Awassi sheep</td>
<td>A road map developed</td>
</tr>
</tbody>
</table>

### 1.2 Conditions for More Diversified and Sustainable Use of Natural Resources Created

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Source</th>
<th>Frequency</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of persons trained in production practices/technologies (disaggregated by gender/age/location)</td>
<td>Central Bank of Jordan M&amp;E system</td>
<td>Semi-annually</td>
<td>M&amp;E officer Component officer</td>
</tr>
</tbody>
</table>

## Component 2: Livelihood Investments and Access to Financial Services

### Outcome 2: Strengthened rural poor people’s productive capacities, market access and resilience through an approach which graduates them out of poverty and provides access to financial services.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Means of Verification</th>
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</thead>
<tbody>
<tr>
<td>Number of jobs (full time or temporary) /enterprises created or expanded for Syrian refugees and host communities. (disaggregated by gender/age/location/income)</td>
<td>Service Providers, M&amp;E system Component reports.</td>
</tr>
</tbody>
</table>

### Assumptions (A) / Risks (R)

- Lack of refugee motivation experience and willingness to invest in livelihoods locally as opposed to aspirations to return to their home country.
- Economic or political constraints for Syrians such as legal barriers for refugee employment or economic participation.

- Water availability in the pastures and for forage/crop and production.
<table>
<thead>
<tr>
<th>Results Hierarchy</th>
<th>Indicators</th>
<th>Means of Verification</th>
<th>Assumptions (A) / Risks (R)</th>
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<tbody>
<tr>
<td><strong>Outputs:</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.1 Grant-based income-generating packages available for on-farm and off-farm enterprises,</td>
<td>• Number of Syrian Refugees and members of host communities accessing Graduation packages and engaged in at least one new income generating activities (disaggregated by income and gender),</td>
<td>CBJ, Service Providers, M&amp;E system Component reports</td>
<td></td>
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<tr>
<td></td>
<td>Number of persons/households provided with targeted support to improve their nutrition (disaggregated by gender),</td>
<td>Semi-annually</td>
<td>M&amp;E officer Component officer</td>
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<tr>
<td></td>
<td>Baseline</td>
<td>Mid-Term</td>
<td>End Target</td>
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<td></td>
<td>0</td>
<td>1,500</td>
<td>3,650 (70% Syrian refuges and 30% host communities)</td>
</tr>
<tr>
<td>2.2 Loans provided for the purchase of small ruminants for breed improvement and on-farm and off-farm MSMEs</td>
<td>• Number of rural enterprises and FSPs accessing business development services (disaggregated by gender/age)</td>
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The Hashemite Kingdom of Jordan
Small Ruminants Investment and Graduating Households in Transition (SIGHT)
Final Design Report

I. Strategic context and rationale

A. Country and rural development context

1. Jordan is a middle-income country with a per capita Gross National Income (GNI) of USD 4,680.² The population that was 6.249 million in 2015³ is projected to have increased to 7.748 million in 2016⁴ due to the influx of the Syrian refugees. The country is highly urbanized (only 16% is rural, 2015⁵) and is primarily a service economy with heavy dependence on the public sector. Jordan’s market-oriented economy is among the smallest in the region, with insufficient supplies of natural resources. The country receives significant official development assistance, which constituted 7.6% of GNI in 2014 and it has considerable outstanding external public debt with the Government debt to GDP ratio of 93.4%.⁷ Despite the substantial foreign financial assistance and an abundance of skilled human resources, the national economy faces complex challenges including a high population growth rate, continuing influx of refugees and economic migrants, growing pressure on its natural resource base, increasing scarcity of water resources and the negative effects of climate change.

2. Employment. Official data published by the Department of Statistics (DoS) show that the unemployment rate in 2016 was 15.25%,⁸ reversing a drop that had been seen in 2014. Periods of strong growth have not translated into strong job creation for Jordanians. As a consequence, Jordan unemployment rate, especially among youth, has remained in the double digits over the last decade. For women and men, the estimated unemployment rates were 28.9% and 11%, respectively in 2016.⁹ For women agriculture is the major sector where they make up 65% of the labour force.¹⁰ Under the mounting pressure from the Syrian crisis, the participation of rural women in the sector has declined.

3. The service sector has the largest share of employment at about 80% followed by 18.5% for industry and 1.8% for agriculture¹¹ (2014). The figure for agriculture does not include casual agricultural labour, home-based income-generating activities and small-scale farming and livestock keeping (mostly small ruminants), which are mainly run by women. The agriculture sector shed jobs for Jordanians and created new ones for the non-Jordanians; however employment in that sector is minimal¹². Unemployment amongst Jordanians in areas with high concentrations of Syrian refugees, and in northern Governorates in particular, rose from 14.5% to 22.1% between 2011 and 2014.¹³ In many cases, Jordanians are out-competed by the refugees who are willing to accept considerably lower wages and poorer working conditions than Jordanians.

4. Adverse regional developments and Syrian refugees. The Syrian and Iraq crises remain the largest recent shocks affecting Jordan. The country is now hosting 1.26 million Syrians, of whom 657,000 are refugees.¹⁴ Nearly 79% of refugees are highly or severely vulnerable to food insecurity, and 72% are severely vulnerable due to the adoption of emergency coping strategies to meet food needs.⁶ Ninety-three percent of Syrians living outside of camps are living below the poverty line in Jordan.¹⁵ The vast majority of the refugees come from rural areas in Syria;

⁴ Including predicted number of refugees.
⁶ http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS
⁷ www.tradingeconomics.com
¹⁵ Jordan: UNHCR Operational Update, January 2017
they constitute a relatively younger population with lower education compared to the Jordanian host population. This influx has resulted in huge pressure on the country’s social fabric, basic infrastructure, services and resources and impacts heavily on Jordan’s public finances, foreign direct investment (FDI) flows, increasing government expenditure on subsidies, public services and security while further compounding the negative economic consequences of regional instability. Other major challenges facing Jordan include high unemployment, a dependency on grants and remittances from Gulf economies, as well as continued pressure on natural resources.

5. Work permits issued so far to refugees number 34,467 of which only 2% have gone to Syrian women. In the informal labour market, only 7% of Syrian women access work, compared to 51% of Syrian refugee men. Around 120,000-160,000 Syrian refugees working are estimated to be working informally in the country. The ‘open’ sectors that Syrians are allowed employment with work permits include manufacturing, construction, agriculture, while ‘closed’ sectors include marketing, education, hairdressing, and most professional sectors such as engineering and medicine as well as any kind of selling in markets. Minors under age 18 form a group of informal Syrian workers who are not eligible for work permits, and number approximately 11,098 workers.  

6. Poverty. Poverty rates have increased from 14.4% in 2010 to an estimated 20% in 2016. Earlier analysis of the poverty profile of the country estimated that overall, 33% of the population (18.6% transient poor and 14.4% official poor) experiences poverty during at least one quarter of the year. Poverty in Jordan is significantly higher among larger households and those with less educated heads. The link between household size and poverty sharpened between 2006 and 2010 and in all likelihood has been reinforced by direct and spill over effects of the Syrian influx.

7. Agricultural sector. Jordan currently imports the vast majority of its basic food crops, including almost 100% of cereals. This places an increasing burden on its current account unless Jordan can increase its agriculture productivity. The agriculture sector has been growing and has doubled its share of GDP from 2-4% in the past 5 years in the main driven by domestic demand. The Jordan Economic Growth Plan has set a target of 5% growth in GDP and the expectation is that agriculture will have to grow by 10% to meet this target. Despite its small contribution to national GDP, the sector is of importance in Jordan, for its socio-economic fabric, and role in political stability, as well as its central role in food security, rural development, providing job opportunities, and the forward and backward linkages of the sector. More than 90% of the country’s area is classified as arid and termed as Badia. It receives low rainfall and has poor quality soils and it is principally used for providing pasture for livestock. Of the remaining land, only 10% is irrigated. The country has limited land resources and only around 5% of its land area is arable. Jordan is a net food-importing country including wheat, barley, sugar, rice, chickpea, lentils, corn, and vegetable oil (except olive-oil). The major components of the agriculture sector horticultural, poultry industry and small-scale herding. Much of Government of Jordan’s (GOJ’s) domestic agricultural policy is focused on the management of its scarce and rapidly depleting water resources in an effort to support its traditional livestock owners and develop an export-oriented horticultural sector.

8. Water Scarcity and Climate Change. Jordan is one of the most arid countries in the Middle East, and faces severe water shortages. The current per capita water supply in the country is

18 Social Protection and Safety Nets in Jordan Ghaith Zureiqat and Hadeel Abu Shama December 2015
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200 cubic meters per year which is almost one-third of the global average. It is projected that Jordan’s growing population combined with the influx of refugees will cause a drastic decline in per capita water availability. Most of Jordan has a desert climate with little or no rainfall. Water scarcity is a severe constraint to Jordan’s development. Current annual precipitation ranges from about 30 – 570 mm per year. Large parts of the country receive less than 100 mm of rainfall. Figure 1 below gives the rainfall pattern. Groundwater resources account for 54% of Jordan’s total water supply, and are being threatened by pollution due to over-pumping of aquifers. Agricultural sector is responsible for about two-thirds of Jordan’s total water consumption. Climate change acts as a threat multiplier, aggravating already existing water problems. The Ministry of Water and Irrigation has formulated a Climate Change Policy for a Resilient Water Sector in 2016. The Climate Policy outlines a pro-active and adaptive process towards a resilient water sector.

Figure 1: Rainfall Pattern in Jordan

9. **Rangelands.** About 90%, or 80,771 km², of the country consists of grazing lands; 69,077 km² of which receive less than 100 mm of rainfall, and 1,000 km² of marginal grazing with 100-200 mm annual rainfall. These lands are for the most part also over-stocked by predominantly small ruminants. The stocking rate is at least twice times as much as the carrying capacity. The Al-Badia rangelands are deteriorating due to increased population, early and overgrazing by an increasing sheep population, fuel collection through cutting and uprooting of fodder shrubs as source of firewood. The shortage of water and the un-regulated overgrazing are manifested in the degraded soil profiles and eroded slopes with considerable reduction in the carrying capacity of the rangelands. Unpalatable perennials increasingly dominate the vegetation cover. Under Jordan law, all land in Al-Badia is considered as state-owned which implies accessibility and right of use for all, but traditional rights of use also exist. Overlapping systems of resource management have frequently led to resource degradation. The Government has initiated several measures such as establishment of rangeland reserves and protected areas to preserve biodiversity and set models for the correct use of fragile resources. The reserves are planted, managed and protected by the Rangeland Directorate. The range management specialists determine that the grazing capacity will allow neighbouring pastoral groups to use the reserves for certain periods of time and with a specific number of animals for grazing. Government's introduction of palatable shrubs in rangelands was designed to reduce land degradation, soil erosion and enhance feed availability. The Badia Restoration Project is also designed to restore the rangeland ecosystems to its appropriate productivity and regenerate its capacity to provide grazing for livestock.

10. **Small Ruminant Sector.** There are 34,761 sheep and goat raising families in the country owning about 4.5 million heads (MoA Livestock Identification and Registry System of MoA, 2017). The contribution of the livestock sector to the national agricultural product is 55% while

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that of sheep and goat is 33.3%.\(^{22}\) The sector employs 55,990 people as wage labor or unpaid family member out of which 75% is Jordanian (27% female) and 25% is Non-Jordanian (8% female).\(^{23}\) Contribution of small ruminants to total production of fresh milk and red meat is 28% and 77%, respectively. Due to the following issues there are concerns on the small ruminant sector's ability to support rural livelihoods: (i) poor genetic material largely resulting from continuous inbreeding at the smallholder level and limited institutional support to the sector, in terms of providing breeding services; (ii) weak disease management due to limited institutional support for veterinary services; (iii) malnutrition stemming from shortages of locally produced feedstuffs, unaffordability of feed prices, and low productivity of grazing lands; (iv) poor flock management; and (v) water scarcity that is further exacerbated by climate change and overexploitation of groundwater particularly in semi-arid areas which is compounded as a result of the influx of the Syrian refugees.

11. The Awassi sheep is the most popular local breed of sheep in Jordan as a triple-purpose breed for meat, milk and wool (not utilized anymore after the Syrian crises because of closing of trade routes). It is a hardy breed that evolved as a nomadic sheep through natural and selective breeding to become the highest milk breed in the Middle East. Depending on the quality of the rangelands and the cropping patterns, the majority of the feed requirements are met by subsidized feed, crop residues and rangelands. Forage crops such as alfalfa are only produced in irrigated areas that are in fact, very limited outside of Jordan Valley. Subsidized feed is reported to meet about 15% to 20% of the feed used by small-scale herders. Despite its attempts to withdraw this subsidy, the Government has been unable to do so because of political pressure. In order to protect, improve and sustainably manage the sector, GoJ established 33 Rangelands Reserves in the country. However, due to poor legislation and lack of enforcement, reserves are threatened by overgrazing, woodcutting, plant collection and illegal hunting and meet only a very limited proportion of the feed demand (estimated as 5-15%) depending on the reserve site.

12. **Marketing.** There is a ready market for live animals even though prices vary based on season and breed, with Awassi sheep fetching higher prices. An extensive study of the market system for small ruminant confirms the very active and idiosyncratic nature of the market which responds to local demand for both meat and dairy (Appendix 13.1). Animals are generally sold live to livestock dealers, retailers, livestock markets and directly to customers. The dealers sell the animals either directly to retailers for sale in local markets or for export. The farmers are very active in destocking their flocks when they need cash, perceive that feed will not be enough due to drought or the flock is at risk due to disease and respond very actively to price signals. On average for the last ten years, Jordan has imported about 700,000 head of live animals per year of which about 75% or 500,000 are small ruminants; of these, 90% are sheep. On the other hand, Jordan annually exports (mainly to Saudi Arabia and the Persian Gulf countries) about 500,000 head of domestic sheep, which have higher value than the imported breeds.\(^{24}\) Saudi Arabia and the United Arab Emirates are the main export destinations for live animal and meat export of Jordan.\(^{25}\) Almost all the exported and about 40% of imported animal use land borders. Sheep meat imports will continue to rise due to increasing domestic demand, while climatic factors and poor structure may limit production growth. Milk is processed to make yoghurt, jameed (dried cheese), ghee and labneh. Most of the dairy products are sold and only 12.9% are domestically consumed. The country is not self-sufficient in dairy products especially cheese, jameed and powder milk products due to lack of processing and storage facilities.

13. **Animal health.** Diseases are a major cost item for sheep and goat owners. Five diseases are included in MoA's compulsory vaccination program but with limited effectiveness. Furthermore, the percentage of vaccinated animals through the government programme is very low despite

\(^{22}\) MoA, 2012.

\(^{23}\) Strategic Plan of the Agriculture in Jordan, January 2014 (EU Technical Assistance).

\(^{24}\) MOA statistics.

\(^{25}\) The Jordanian Times, Feb 2017.
the vaccination being compulsory for livestock owners to be eligible for the government-subsidized feed. Private sector also vaccinates small ruminants but no data is available regarding their outreach. The issues in the animal health sector are amplified by low management capacity and include: (i) poor infrastructure of the veterinary clinics and laboratories; (ii) weak laboratory diagnostic capacities; (iii) poor quarantine services; (iv) insufficient workforce (veterinarians and animal health technicians) and capacity of the sector; (v) high turnover of the skilled veterinarians; (vi) insufficient in-service training for professionals; (vii) high prices of veterinary medicines; (viii) poor effectiveness of vaccines; (ix) uncoordinated irregular reporting of zoonotic diseases; and (x) lack of an institutionalized “approach to disease control; and xii) poor disease surveillance systems".

14. **Animal nutrition.** The cost of animal feed exceed 60% of the total production cost of small ruminants in Jordan and nutrition is a significant factor in enhancing animal productivity. However, livestock owners are not very aware of the need for a balanced ration that meets animal requirements at different physiological stages (late pregnancy, lactation, mating time, growth, etc.). Moreover, farmers lack the knowledge about the increased susceptibility to diseases and the decrease in milk production and daily weight gain that is caused by nutrient deficiency. Barley and wheat bran are presently the main, if not the only, source of concentrate feed provided to small ruminant in Jordan, as they are offered by the government at subsidized prices. Land fragmentations and the expansion of cities in the high rainfall areas are the main reasons for the decreasing area planted with wheat. On the other hand, agricultural by-products are not effectively used as animal feed.

15. **Access to finance.** Jordan is home to a sound and solid banking system and a dynamic, high-quality microfinance sector that works to meet the needs of lower-income people in the country. However, neither is focused on agricultural lending that has been traditionally been perceived as highly risky and unprofitable. Banks and Micro Finance Institutions (MFIs) have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance products. On average, the share of agriculture in the banks’ portfolio is about 3%, and in MFIs’ portfolio – about 1%, although both banks and MFIs work in rural areas. There are two government providers of financial services to MSMEs and agricultural businesses: (i) Agricultural Credit Corporation (ACC); and (ii) The Development and Employment Fund (DEF) that are heavily subsidized institutions focused on delivering credit to specific target groups yet with almost no mechanisms to ensure reaching out to smallholders and entrepreneurial rural households.

16. **Government Programme and Medium-Term Strategy.** In May 2015, the GoJ launched its vision Jordan 2025, a new ten-year strategy that calls for a transformation of Jordan’s socio-economic model of development to achieve growth and prosperity based on competitiveness and providing more employment opportunities. The strategy identifies priority export markets beyond the traditional regional ones with the target to become a regional hub. It also identifies priority clusters to drive growth and create jobs both building on existing strengths and identifying opportunities in new clusters based on emerging trends. In order to implement Jordan 2025, the Government has formulated a medium-term development programme, the 2016-2018 Executive Development Plan. The estimated financial needs in the EDP amount to USD 14 billion, of which the Government has identified USD 2.47 billion in priority projects and programmes across 13 sectors with agriculture identified as one of the priority sectors.

17. **The Jordan Economic Growth Plan 2018 - 2022** has been developed to recapture the growth momentum and realize Jordan’s development potential. The GoJ has set for itself a target of 5% GDP growth which entails a growth target of 10% for agriculture. The JEGP is comprised of economic, fiscal and sector strategies that outline the vision and policies pertaining to each sector. It further identifies the required policy interventions, public projects and private

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26 MoA 2011, Policy Series.
28 Information received during the project design mission.
investments that must be undertaken to realize these sector visions. A successful implementation of the IMF Extended Fund Facility Programme (EFF) along with the JEGP is expected to put Jordan on a sustainable growth trajectory and ensure its economic resilience in the face of regional turmoil. Jordan has showcased its ability to remain resilient, maintain internal cohesion, and reinvent itself in the face of adversity.

18. **Jordan’s Poverty Reduction Strategy (2013—20) and Agriculture Development Strategy (2016)** are designed to increase the contribution of the agricultural sector to GDP, promote job opportunities, and empower women and youth to develop small enterprises, thereby improving their living conditions. The most recent drive for reforms has focused on Jordan’s need to achieve self-reliance and stability based on enhanced productivity and increased competitiveness. The Government has been very supportive of the livestock sector. The Government provides animal health and extension services free of charge and subsidises barley and wheat bran and water in the Badia is offered free of charge to sheep and goat owners. The Government is investing considerable resources in the national rangeland rehabilitation programme, which is using participatory methodology in planning and executing range development and management. The Jordan Cooperative Organization is also undertaking an active role in support of range cooperatives to improve grazing in communal lands allocated by the Ministry of Agriculture.

19. **The Government has also developed the Jordan Response Plan (JRP) 2016-2018** which is its three-year programme of high priority needs as a result of the Syrian crisis. It identifies the: (i) direct refugee interventions; (ii) resilience-strengthening, including for host communities, service delivery systems and public authorities; and (iii) specific budget support needs to cover the costs and income losses induced by the crisis, for example the cost of subsidies and some security costs. The Government estimates its JRP-related financing needs for the coming three years at USD 8.25 billion. The World Bank and EU are supporting the Government in this plan. The Jordan Compact adopted at the London Conference is based on turning the Syrian refugee crisis into a development opportunity that attracts new investments and opens up the European Union market with simplified rules of origin, creating jobs for Jordanians and Syrian refugees whilst supporting the post-conflict Syrian economy.

**B. Rationale**

20. In keeping with the Jordan Economic Growth Plan (2018–2022) to recapture the growth momentum and assist the country in achieving a 5% growth rate in GDP, the Government is committed to growing the agriculture sector. Within the agriculture sector, the livestock sector constitutes the major share of agriculture GDP (55%) and also contributes significantly to the national income from exports and is critical for food security and poverty alleviation. The small ruminant sector constitutes 32% of the livestock sector and is the most important sector for the poor rural communities in the Badia. Approximately 25% of Jordan’s poor rely on agriculture. IFAD’s comparative advantage in addressing rural poverty by supporting investments in agriculture and rural development in rain-fed and semi-arid areas will be used in the proposed investment. The SIGHT project will focus on addressing several key problems in the small ruminant sector including the gradual deterioration of the livestock breeds, extension and animal health services, water scarcity, shortage of feed, and degraded rangelands. Jordan is a food deficit country, and is among the seven countries identified as most vulnerable to the impact of high food prices. An analysis of the self-sufficiency ratio for meat products in the country indicates that the overall self-sufficiency ratio for all meats is low with the lowest ratios for mutton and beef. Animals and animal products amount to 39% of the total value of imported foods. The value of imports is further expected to increase due to the increases in population and increase in demand for meat.
Table 1: Self-Sufficiency Ratio (SSR) of Animal Meats, 2013

<table>
<thead>
<tr>
<th>Products</th>
<th>SSR (%)</th>
<th>Production (tons)</th>
<th>Imports (tons)</th>
<th>Exports (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>11.8</td>
<td>6,786</td>
<td>62,793</td>
<td>12,101</td>
</tr>
<tr>
<td>Mutton</td>
<td>32.4</td>
<td>10,854</td>
<td>35,841</td>
<td>13,161</td>
</tr>
<tr>
<td>Goat Meats</td>
<td>54.1</td>
<td>4,184</td>
<td>3,919</td>
<td>376</td>
</tr>
<tr>
<td>Chicken Meats</td>
<td>77.7</td>
<td>182,264</td>
<td>75,274</td>
<td>22,942</td>
</tr>
</tbody>
</table>

21. In the last 20 years, sheep numbers have grown 30%, while goat numbers have grown only 10%. However, the population of the country has increased by more than 80%. As a result the per capita availability of livestock products has not kept pace with the growing demand from the domestic and export markets. The per capita availability of meat in Jordan has dropped from 40.80 kg per capita in 1975 to 32 kg per capita in 2015 (see Figure 2). There is likely to be a growing demand for animal products. The project will assist in achieving the strategic objectives of the Government of increasing food security, poverty alleviation and improving the trade imbalance. The project will assist in improving the systems of small ruminant breed improvement and traceability, assist the country with its endeavours for Geographical Identification of the Jordanian Awassi sheep and help in determining its potential as a unique marketing trademark. The project will put in place an incentive system that helps farmers to replace their less productive animals with more productive breeds through provision of improved rams.

Figure 2: Small Ruminant - Per Capita Availability of Meat (Kg)

Source: Calculated from basic figures in MoA and population figures.

22. The SIGHT project will deal with the weaknesses in the public sector regarding small ruminant breeding, feeding and production while also supporting community, cooperative and the private sector to increase the productivity of small ruminants through enhancing technical capacity of existing elite farmers, smallholders, farmer organizations and cooperatives and the private sector. The project will work to strengthen the breeding services, animal health, nutrition and quarantine services. The project will work with the Hashemite Fund to assess the potential for Geographical Identification and potential for the Awassi Jordan as a thigh quality trademark. The project will also build the resilience of small ruminant farmers in dealing with climate change impacts especially in the management of pastures and rangelands in the Badia. The project will identify key policy issues with the potential to support the small ruminant sector to become more profitable and help the GoJ in achieving some of its strategic objectives.

23. A major political priority in the country is to prevent rangeland degradation and reverse the desertification process. Rangeland reserves provide a multitude of ecosystem services including improvements in livestock production, conservation of biodiversity, maintaining habitat and connectivity for fauna and flora, increases the moisture-holding capacity of the soil, protecting hydrological cycles, capturing atmospheric carbon, and reinforcing local culture.
Rangeland reserves can therefore contribute to poverty reduction and economic growth as well as protection of habitat and conservation of endangered species, and they have benefits to people outside their boundaries. The project will work with MoA and local communities in selected reserves to systematically develop the rangeland resources using the combined experience of MoA, NCARE, IUCN.

24. Growth in the agriculture sector also requires access to finance. However, lack of specialized agricultural finance products is an issue in Jordan. Though the country has a strong and capable banking and microfinance sector, agricultural lending has not been a priority either for banks or MFIs as agriculture has been traditionally perceived as highly risky and an unprofitable business. Accordingly, banks and MFIs have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance products. Only about 3% of banks’ and 1% of MFIs’ loan portfolios are in agriculture; but both banks and MFIs are interested in exploring this new area for them. Some rural households are also reluctant to borrow given their apprehensions that these loans may not be Sharia compliant. However, Islamic finance products are now available in the financial markets and could be directed to these households. The current project presents an opportunity to build the confidence and risk appetite of commercial banks for the agriculture sector through the Central Bank of Jordan which has secured agreement with commercial banks to provide low interest rate loans which are guaranteed by the Jordan Guarantee Corporation.

25. The proposed project design also capitalises on the opportunity to support the Jordan Response Plan for the Syria Crisis and has integrated into the design, components which can assist Syrian refugees and their host communities to graduate out of poverty through a package of support, training and asset creation for addressing issues of food security and building resilient livelihoods. This is all the more critical given that the Syrian crisis has disrupted trade and caused a large influx of refugees, straining public services, finances, and labour market conditions in Jordan and continues to exert significant pressure on host Governorates and communities. The project also provides an opportunity to utilise the funds from FARMS and mobilize additional resources from the Swiss Development Corporation to work with Syrian Refugees and host communities to ease the pressure that the influx of refugees is exerting on the scarce natural resource base as well as assist the Syrian refugees in developing sources of livelihood support which will assist them during this difficult transitory phase and graduate the host communities out of poverty. The title of the project Small- ruminant Investments and Graduating Households in Transition (SIGHT) reflects this dual focus of the project.

26. The SIGHT project is very well aligned with the Government’s plans for addressing its Sustainable Development Goals (SDGs). The Government has internalized the SDGs as part of the Jordan 2025 plan and has built into its development planning framework the indicators to be developed for tracking progress on the SDGs. A Delivery Unit has been established at the Prime Ministry to monitor implementation. The Government has stressed that the gap in development financing to meet the investment needs of implementing the 2030 agenda and its SDGs require a more coordinated partnership from the Government, donors, multilateral institutions, the private sector and civil society. The Government has pointed to the need to tap into traditional and non-traditional sources of financing including ODA, PPPs, Islamic financing to support long term investments needed to meet the SDGs and combine financing for development with stronger policy guidance, more effective technical assistance and enhanced capacity building to help countries build economic resilience. The SIGHT project is designed to bring these various elements together to assist the Government in meeting its SDGs.

27. The Government of Jordan and IFAD have had an active collaboration since 1982 in agriculture and rural development, in both rain-fed and semi-arid areas of the country. It is recognized by the GoJ that the small holders engaged in livestock, particularly small ruminants, are poor and need expert advice and incentives to increase incomes from traditional livestock farming. IFAD.

has responded to the Government’s request for assisting in the formulation and financing of an investment in the small ruminant sector as there have been few investments by the donor community in this sector and the Government lacks the financial and technical means to initiate such an investment. The Theory of Change, which underpins the current IFAD investment is that improved breeds and feed sources, will help enhance the productivity and incomes of small ruminant farmers in Jordan. The theory further suggests that the Government alone cannot provide sufficient number of improved rams or the extension advice needed to support sustainable behaviour change by the large number of small holders. Therefore elite farmers and collective farmers groups will be enlisted to work in a public-private partnership mode to assist in improving breeding, feeding and livestock farming practices. Furthermore, long-term sustainable change requires a policy environment that provides strong incentives to encourage the diversification of alternate feed sources, proper management of rangeland resources and recourse to improved technology to introduce and strength the system of traceability for access to diverse and new markets.

28. The Theory of Change with respect to the provision of financial services is that many of the households need financial services but cannot access them due to their reservations about interest based lending being un-Islamic, collateral requirements, high interest rates and lack of financial service providers with a commitment to support agriculture and rural lending. Furthermore, many among the Syrian Refugees and host communities cannot afford financial services but have the commitment to graduate out of poverty through support, productive assets and skills to help them invest in a sustainable source of livelihood. Well tested and proven strategies which have worked well in other countries for the extreme-poor and poor such as the Graduation into Sustainable Livelihood programmes present an appropriate strategy for the poor in Jordan and can help households graduate out of poverty. Therefore, innovative services and training in entrepreneurial and employment skills will provide sustainable livelihood opportunities to reduce poverty and enhance food security in Jordan. This assistance will help to improve stability within Jordanian host and Syrian refugee communities and can help them co-exist in harmony with reduced friction that is a consequence of the limited resources at their disposal.

29. The IFAD Country Strategy Note for Jordan (October 2016) identified two strategic objectives for IFAD short-term engagement, namely: (i) SO1: enhance resilience of small-scale farmers and livestock owners to climate and production risks; and (ii) SO2: facilitate access to financial services and markets. Furthermore, at the national and institutional level, numerous government plans, strategies and action plans including Government Program and Medium-Term Strategy, Jordan Economic Growth Plan, Jordan Response Plan, Poverty Reduction Strategy, National Action Plan to Combat Desertification, National Action Plan for Drought Mitigation Programme for Mainstreaming Gender in Climate Change Effort are all well aligned with IFAD’s Strategic Framework (2016-2025) and its strategies on Targeting, Gender Equality and Women’s Empowerment, Rural Finance, Private-Sector Development and Partnership Strategy.

II. Project description

A. Project area and target group

30. Project area. The project will be implemented in the six northern and central Governorates of Mafraq, Irbid, Jerash, Ajloun, Madaba and the outskirts of Amman. However, the institutional support and technical strengthening of the breeding, animal tracking system of NAIS and quarantine will target the public services at the national level. The selection of the governorates is based on the following criteria: (i) the size of the small ruminant population; (ii) number of households involved in livestock farming; (iii) poverty rate; and (iv) the size of the Syrian refugee population being hosted. Within the governorates, the following criteria will be used to select areas of intervention (i) high dependency of the rural poor on livestock; (ii) communities hosting Syrian Refugees; and (iii) interest of potential beneficiaries in project activities. Project activities will be clustered geographically as far as possible to promote synergies, impact and efficiency in delivering services.
Project target group. The primary target group of SIGHT will be Jordanian women and men who are small-holder livestock farmers for whom small ruminants are a source of income, food security and a safety net. In Jordan, there are 34,761 smallholder families dependent mainly on sheep and goat raising (MoA, 2017). In addition, there are 1,500 Jordanian and 11,270 non-Jordanian permanent labourers working in this sector (DoS, 2014). About 95% of sheep and goats are raised under the semi-intensive system with farmers stall-feeding their sheep and goats and utilizing range and field crop residues when available. Within this group, the project will be engaging with both the vulnerable small ruminant farmers operating at a subsistence level and those with higher productive potential. Most Jordanian Bedouin tribes are at least partially settled with less than 17% of the population in rural areas. Some Bedouin in Jordan are semi-nomads, they adopt a nomadic existence during part of the year but return to their lands and homes in time to practice agriculture. The project will be working with the western Bedouin who herd sheep and goats in the project area. The project will be working with the tribal Bedouin communities in better understanding and incorporating principles of community rangeland management to protect the Badia and enhance its productivity.

Women and youth will both be important target group for the project. play an important role in livestock rearing, even though their contribution is not fully acknowledged in the official statistics. Thus women will be an important target group. Youth will also be an important target group for SIGHT as more than seventy-percent of Jordan’s population is under 30 years of age. Eighty one percent of Syrians are under the age of 35, with 65% of all registered Syrian refugees under the age of 25. Youth experience high rates of unemployment. In rural areas, the challenges youth face in Jordan are exacerbated as employment opportunities tend to be even more limited. They are seventy percent of the country's population but face high rates of unemployment. Opportunities for employment are even more limited in rural areas. The new generation is moving away from agriculture and there is a strong preference for among young men and women for employment in the public sector. Young women In rural areas face even higher rates of unemployment and more limited opportunities due to cultural restrictions especially on mobility. Young Jordanians men do engage in agriculture to some extent, they are also involved in mobile repair shops, car mechanics, shopkeepers etc. Young Jordanian women may be involved in selling fruits and vegetables or home-based businesses. Syrian youth’s barriers are further intensified due to restrictions of sectors they can work in and they are likely to get the lowest paid jobs as waiter, agricultural labour, cleaners etc. with young women likely to stay home and at best engage in some home-based businesses. The constraints youth face, to varying degrees depending on their nationality and gender, include lack of capital, limited availability of jobs, mismatch between skills and jobs available and lack of experience in running a business. These young men and women will be supported with customized grants for graduation into sustainable livelihoods.

The poor and extreme-poor Jordanian rural host community households and Syrian Refugees will also be an important target group with a special focus on women and youth. Opportunities for Jordanian women and men in rural areas are limited. Women’s income generating activities include processing of dairy products, tailoring, agro-food processing, small shops, embroidery, livestock rearing and vegetable and fruit farming. Some women are members of CBOs and cooperatives and undertake income-generating activities such as agro-food processing as a group. Men are typically engaged in agricultural activities, casual labour, some are mechanics, plumbers or electricians and some may be working for small businesses. These men and women’s constraints include lack of capital, inadequate levels of skills, poor access to finance as well as lack of marketing expertise and linkages and for women specifically, limited population.

Most Syrian households live under the poverty line. The main source of income comes from cropping and livestock. Most households are employed as labour in the agricultural sector. The majority work on olive and fruit orchards with some working in vegetable farming and livestock production. Many among the Syrian refugees have skills that will enable them to engage in a range of income generating activities. These skills include carpentry, tailoring, plumbing, hairdressing, baking traditional sweets, curtain-making, soap-making, processing of dairy products, agro-food processing, agriculture and livestock rearing, etc. In these and other small businesses, obtaining work permits and licenses, lack of capital for operating costs and
investment in basic equipment remain key constraints. The project will focus on those activities that are permitted to them through the Jordanian government.

B. Development objective
35. The project will be implemented over a 6-year period. The development goal of the Project is to contribute to reducing poverty and enhancing national food security in Jordan by improving the productivity of small-ruminants and to assist Syrian Refugees and host communities to graduate out of poverty through a package of livelihood support. The development objective is to increase the income of 11,920 vulnerable households through providing sustainable production capacity. The project title “Small-ruminant Investments and Graduating Households in Transition” (SIGHT) reflects this dual focus of the project.

C. Outcomes/Components

Outcomes
36. Two outcomes are expected from the project: (i) strengthened public and private sector capacity to enhance productivity of smallholder livestock farmers, increase incomes and build resilience; and (ii) strengthened rural poor people's productive capacities, market access and resilience through an approach which graduates them out of poverty and provides access to financial services. The capacity enhancement includes the capacity for the provision of extension and veterinary services to smallholders and improved policy and regulatory environment for livestock and rangelands in the country. The second component will provide opportunities for sustainable livelihoods for the Jordanian rural poor and Syrian refugees and host communities through the adoption of a graduation approach for the poor and access to financial and advisory services for the entrepreneurial women and youth.

Components
37. The SIGHT Project will consist of two main components: (i) Investment in Farmer Services; and (ii) Livelihood Investments and Access to Financial Services.

Component 1: Investment in Farmer Services (Total Budget: USD 4.307 million)30

38. This component will support the public and private sector to ensure that small ruminant producers receive a set of complementary services that are needed to enhance the efficacy of small-scale livestock production systems and the incomes of the smallholders. This component has three closely related and reinforcing sub-components: 1.1. Enhancing Public Services; 1.2. Improving Community and Private Sector Services; and 1.3. Support for Policy Engagement. The details of the component have been outlined in Appendices 4 and 5. This component has been designed to strengthen the small ruminant sector at the national level and assisting in developing a long-term vision for the sector.

39. Sub-component 1.1. Enhancing Public Services (USD 2.293 million). The objective of this subcomponent is to increase the productivity and competitiveness of the small ruminant flocks in the country by strengthening the national breeding programme led by the MoA and NCARE and complementary public support systems needed in health services, strengthening the system of quarantine and traceability through selected investments in infrastructure and capacity building. The subcomponent includes the following specific activities: (a) establishing the Open Nucleus Breeding Programme (ONBP) breeding programmes for sheep and goats; (b) strengthening sheep and goat breeding stations; (c) refurbishing the training center at Khanasrah Station; (d) improving diagnostic animal health laboratories and Artificial Insemination capacity; (e) rehabilitation of MOA quarantine and animal health certification

30 The costs include only IFAD and FARMS share of the financing.
facility in Mafraq; (f) Geographical Indication (GI) for the Jordanian Awassi Sheep; (g) Improving animal traceability; and (h) TA, training and capacity building.

40. **Comprehensive Breeding Plan:** (USD 1.174 million). The project will support the MoA and NCARE in developing a comprehensive breeding programme which follows the FAO Open Nucleus Breeding Program (ONBP) methodology. The programme is based on estimating the overall demand and supply of rams and Artificial Insemination techniques to provide extensive cover and build on farmer incentives to destock and enhance productivity. The outreach of the breed improvement programme will be undertaken through a system of participation of elite and semi-elite farmers. The programme will start with a survey to determine the phenotypic and genotypic characterisation of the Awassi sheep. The ONBP will be established at the Khanasrah and Al-Wallah stations, for Awassi sheep and Shami goats, respectively. The project will also support the following five stations which will be responsible to develop business plans using TA and training provided by the project for the continuation of the programme beyond the project period.

- Khanasrah Station for Awassi sheep; under NCARE; in Mafraq Governorate;
- Al-Fujii Station for Awassi sheep; under MoA, in Muan Governorate;
- Muscharfa Station for Awassi sheep; under MoA, in Karak Governorate;
- Al-Wallah Station for Shami goats; under MoA, in Madaba governorate; and
- Sabha station (for Awassi sheep) for selected support in collaboration with HFDJB.

41. **Training Center at Khanasrah Station** (USD 100,000). The training center at Khanasrah station will be rehabilitated and equipped to improve delivery of training for both NCARE and MoA staff and for smallholder livestock farmers, especially training foreseen within SIGHT project.

42. **Improving diagnostic animal health laboratories and AI capacity** (USD 156,000). The laboratories of selected NCARE and MoA Directorates will be upgraded for their capacities for disease diagnosis through equipment and staff capacities. Support will be provided to the: (i) Khanasrah station; (ii) Irbid Agriculture Directorate (serving Irbid, Ajloun and Jerash); and (iii) Madaba Agriculture Directorate. Besides, the MoA’s and NCARE’s technical capacities to introduce AI services for sheep and goats will be strengthened by providing training to the public staff but also to available para-vets, lead farmers/herders and others interested capable of providing AI service as a business.

43. **Rehabilitation of the MoA Quarantine and Animal Health Certification Facility in Mafraq** (USD 258,000). The quarantine facility in Mafraq has not been rehabilitated for several year. The capacity of the facility to function properly however has been limited due to the increased and expanded need for quarantine control of animal movement with the entry of Syrian flocks and for increased import of small ruminants to the neighbouring countries as well as with the limited shed space, funding and training received to its staff. For instance, the total exported animals during 2015 and 2016 reached 1,136,210 heads, while the present total area of animal sheds available for quarantines in the facility is only 5,000 m² with a capacity for 4,500 heads. Investments and technical assistance will be provided by SIGHT to support the upgrading of the facility and the establishment of a modest disease diagnostic laboratory in order to expedite test results that in turn will improve the processing of imported and exported animals. This will also include capacity enhancement activities related to monitoring and control service.
44. **Geographical Indication (GI)** for Jordanian Awassi Sheep (GIAS) (USD 102,000). This activity will link the national Awassi breeding programme with the Geographic Indication (GI) for the Awassi Sheep (GIAS) programme which will be jointly implemented by the Hashemite Fund for the Development of Jordanian Badia (HFDJB) and MoA. The nomenclature “Awassi Jo” will be given to the meat produced by the Awassi sheep that are born, bred, and registered in Jordan. The SIGHT project and the GIAS programme will work together to identify the genetic character of Jordanian Awassi sheep and lay out the foundations and roadmap for registering Jordan Awassi sheep meat under the GI law no. 8/2000. The project will work closely with GIAS to support the programme mainly through the genotypic-phenotypic testing to assess the presence of special distinctive features that can be used to identify the Jordanian breeds. SIGHT will build the capacity, raise the institutional and public awareness and support the administrative and technical capacity of the GI Division of MoA and assist in developing a strategy for outreach to the smallholder for their participation in the programme.

45. **Improving Animal Traceability (USD 53,000).** Jordan is the first Arab country to have initiated a system of traceability of its animals through the establishment of the National Animal Identification System (NAIS). Adopting a tracking system for animal products to increase their penetration in non-traditional markets is an explicit objective of the Jordan Economic Growth Plan (JEGP). However, the current system suffers from several constraints given that the field staff has to enter all records on a manual basis and it is difficult to regularly update the records. Despite the weaknesses of the system, NAIS has been instrumental in the management of the subsidies and traceability of animals. SIGHT will assist the MoA staff at the Governorate level with an innovative way of entering the data using Android Tablets which will have stored digital data of all the livestock owners with geo-referencing. Using the Form Agent front-end software, staff of the MoA Governorates undertaking visits to herders, will directly update the information of sold or slaughtered animals or new-born and newly registered animals with their tag numbers. Special training sessions will be provided to field teams on the use of this software with technical backstopping provided for the initial period. The Tablets will be equipped with specialized internet data SIMs to enable data transmission through internet to the cloud-based backend Form Agent Server at the MoA along with the GPS coordinates of the location where data is entered. Once data is uploaded, it will be integrated in the NAIS registry, checked for data consistency and quality and will be available further for analysis. The data can also be used to monitor the trends in herd size, consumption and trade. SIGHT is suggesting this system to be designed through South-South Collaboration with countries such as in Pakistan that have designed and implemented similar systems.

46. **Technical Assistance, Training and Capacity Building:** (USD 448,000). All beneficiaries of Component 1, including MOA and NCARE staff, men and women individual livestock owners and the members of cooperatives and associations participating in the breeding programme will receive tailored support to develop and enhance their skills and capacities based on their needs. The training programme will be based on a Training Needs Assessment (TNA) that will be conducted in the first year of the project. This assessment will guide and tailor training delivery programme according to the actual needs of the stakeholders. The training package for MOA, NCARE staff, FTs, Lead farmers and cooperatives will be prepared based on TNA.

47. **Sub-component 1.2. Improving Community and Private Sector Services (USD 3.68 million).** The main activities undertaken under this sub-component will be: (a) establishment of Field Teams (private and government staff); (b) pilot investments in and around rangeland reserves and (c) enhancing livestock nutrition activities.

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48. **Field Teams.** The main purpose of establishing field teams will be to establish a system of public-private partnership to support the project enhance its delivery and outreach to the target groups. The field teams will be composed of 3 Farmer Support Teams (FSTs) that are hired full-time by the project and the 6 Government Field Teams (GFTs) who are government employees dedicating part of their time fully to the project. The FSTs and GFTs will work together as one Field Team (FT) with a joint work and delivery plan and will report to the PMU.

49. **Pilot investments in Rangeland Reserves (USD 270,000).** The project will pilot investments for improving access to water and improvement of rangelands in three selected government rangeland reserves, namely Rajib in Ajloun, Duba’a in Amman and Al-Faisaliah in Madaba. The investments will include the following activities: (i) water harvesting infrastructures: rainwater collection wells or hafeers for water harvesting for animals in the rangelands at about 10 to 15 locations around each reserve or other suitable location will be established in coordination with water harvesting department of the MoA; (ii) the regeneration of rangelands will be undertaken in areas designated for the purpose by the rangeland department of the MoA in close collaboration with local communities and tribal leaders. These plantations will be piloted in the target reserves using the combined experience of MoA and NCARe. It is expected that 300 dunums will be planted in Rajib, 200 in Duba’a and 300 in AL-Faisaliah. Planting material, i.e. seedlings and seeds, selected will be those that are most appropriate for the fragile ecosystem of the rangelands. The project will use the simple micro-catchment approach and apply the seeds of native species or those species available at the nurseries of the Ministry of Agriculture, with focus on species palatable for grazing animals to be used for intensive plantations. In each newly designated area, (i) an inventory of the existing flora will be conducted (as described below); (ii) followed by the preparation of a participatory community development plan; and (iii) that will be implemented jointly with the communities. A proper monitoring and impact assessment plan will also be established for these activities and data collected will feed into the SIGHT M&E system. During the Mid Term Review of the project the results from the Pilot will be thoroughly assessed and the project will decide whether to continue and scale up the investment in rangeland reserves.

50. **Enhancing livestock nutrition (USD 176,000).** This subcomponent seeks to support innovative approaches for the provision of nutritive feedstuff to farmers beyond barley and wheat bran. Support will be provided in the form of grants to farmer groups or cooperatives, who provide in-kind contribution and 30% cash of the cost as cost-sharing, to implement a project for the production of feed for their members as well as for sales to other farmers at reduced prices. Projects will be encouraged to utilize agricultural by-products to be included in animal rations. These by-products will be transformed in efficient ways and transformed to enhance their digestibility through such processes as (i) processing into silage specially for the vegetables residues and any other available green forage; (ii) grinding and mixing with barley and wheat bran; (iii) processing as feed blocks (rich in salt and mineral and contains any available feed ingredients); (vi) increasing the nitrogen percentage in straw and olive oil pulp by treating with urea; and (v) adding minerals and vitamins to the animal ration and use salt blocks (include salt and trace minerals) to avoid effect of mineral and vitamins deficiencies.

Sub-component 1.3. Policy Support within the Framework of the Jordan Economic Growth Plan (Total Budget: USD 70,000)

51. In order to assist the Jordan Economic Growth Plan to meet its target for the agriculture sector, there are several aspects of the existing Government policy that may require review for ensuring an overall supportive environment for the agriculture sector generally and for the small ruminant producers in particular. The Government policies often intersect in ways that hinder the overall growth and development of the small ruminant sector. The project will work with FAO through the established National Agriculture Advisory Group whose role is to undertake dialogue, analysis and propose policy engagement paths that will ensure that small ruminant sector remains a profitable and sustainable business. SIGHT in collaboration with FAO will
provide the policy dialogue platform and the technical assistance with modest support to review the existing policy environment and identify opportunities for policy engagement. As stated in the JEGP, the policy agenda could include a (i) review of the Government policy on rangeland governance; (ii) the impact of the feed subsidy on herd size, feed production and use; and (iii) the regulatory environment governing agriculture cooperatives. Based on the lessons learnt during the project implementation, other policy issues may be included within the dialogue with the government.

**Component 2. Livelihood Investments and Access to Financial Services (Total Budget: USD 13.402 million)**

52. This component will provide support to households at different gradients along the poverty spectrum. This includes the Jordanian host communities and highly vulnerable Syrian Refugees, as well as individual entrepreneurs in need of loans for their enterprises. The project will graduate the extreme poor and poor households out of extreme poverty to a more stable state. This approach provides beneficiaries with a holistic set of services including: livelihood trainings, productive asset transfers, vocational training, consumption support, savings plans, job placement etc. By investing in this multifaceted intervention, the project will strive to eliminate the need for long-term safety net services. The target group of the graduation sub-component will be the Jordanian host communities and Syrian refugees. In addition, financial services will be provided for small-holder farmers and young men and women who have the risk appetite and capacity for micro and small enterprises to initiate or expand agricultural businesses and off-farm activities. The Component will consist of two complementary subcomponents: (i) Grants for Graduation into Sustainable Livelihoods; and (ii) Lending Facility for Rural Businesses.

**Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods (USD 9.502 million including funding gap of USD 6.5 million)**

53. This sub-component will target the extreme poor and poor households with commitment to initiate some entrepreneurial enterprise or employment with proper support. This sub-component will benefit 3,650\(^{32}\) (2,050 with existing funding and 1,600 additional) vulnerable women, men and youth from among the Jordanian host communities (50%) and Syrian refugees (50%) with grant based income-generating packages for on-farm and off-farm enterprises. Among the extreme poor who will be targeted, 70% will be Syrian and 30% from Jordanian host communities. This will be done based on a proven Graduation into Sustainable Livelihoods Approach\(^{33}\) that consists of a carefully sequenced, multi-sectoral intervention, comprising social assistance to ensure basic consumption needs are met, skills training, seed capital and asset creation to jump-start an economic activity, provide mentoring support to build confidence and reinforce skills to establish and sustain the business. The type of package will vary depending upon the classification of each household with the packages ranging from USD 3,000 for the extreme-poor to USD 2,000 for the poor. This subcomponent will contribute to meeting the Government of Jordan's commitments under the Jordan Response Plan for the Syria Crisis to provide livelihood opportunities for Syrian refugees. The sub-component has 5.7 million available from existing sources and an additional 6.5 million will be mobilised to meet the financing gap.

54. The livelihood packages will be delivered through 2 or 3 NGOs who will be competitively selected. The organization(s) selected will be tasked with selecting the intervention area in consultation with the PMU according to pre-determined criteria, mapping and selecting beneficiaries, designing a customized graduation package for each beneficiary. The selected NGOs will be required to track the beneficiaries over a sustained period of time to ensure their graduation. Collaboration with EBRD for free-of-charge business training for entrepreneurial Syrian refugees was explored and will be utilized where appropriate. This is a unique approach which has not been tried in the country before, and lessons will be documented to share and

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\(^{32}\) This includes 1600 households that will only be covered if an additional USD 4 million can be mobilized.

\(^{33}\) See: [http://www.cgap.org/sites/default/files/Brief-Graduation-Pathways-Dec-2016.pdf](http://www.cgap.org/sites/default/files/Brief-Graduation-Pathways-Dec-2016.pdf)
examine the potential for scaling up given the potential to use it as a means for poverty alleviation for the extreme poor in the country and the large vulnerable refugee population.

**Subcomponent 2.2: Lending Facility for Rural Businesses (Total Budget: USD 3.9 million)**

55. This sub-component will target about 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement, feed supply and other ancillary activities. The main objective of this sub-component is to demonstrate to the commercial banking sector that the agriculture sector is a promising sector for growth and that directing additional funds to it can help grow their business and meet the Government’s objective of increasing the growth rate in agriculture.

56. The project considered the use of several financial institutions including both ACC and DEF and found that these agencies were currently not interested in using the facility available under the project. On the other hand, the Central Bank of Jordan (which has expressed an interest in partnering with SIGHT) has been successfully disbursing the credit line made available under the World Bank MSME Development project through commercial banks, which disburse directly or wholesale through MFIs at very low interest rates. The Jordan Loan Guarantee Corporation (JLGC) also provides loan guarantee products that enable the provision of loans to those with collateral limitations. The CBJ has a dedicated unit working to manage the credit lines provided by international institutions and has indicated its interest in participating in the project as have some banks.

57. The SIGHT project will provide financial services through CBJ, which will provide the loans through commercial banks, including Islamic banks offering Sharia-compliant products which are demanded by many of the potential target beneficiaries, as well as eligible MFIs. The Jordan Loan Guarantee Corporation is expected to provide access to the guarantee facility to potential borrowers under an existing arrangement with the CBJ, which the project will use for its beneficiaries. Average interest rates on bank loans to the end beneficiaries will range between 4 and 6% per annum. The facility is designed to encourage commercial banks and MFIs to view loans to the livestock sector and rural entrepreneurs as a viable business opportunity and use their own funds eventually to lend to this sector.

D. Lessons learned and adherence to IFAD policies and the SECAP

58. IFAD has supported operations in Jordan since 1981. These include both loans for programmes, grants and non-lending activities, including knowledge management, policy dialogue and partnership building – which are often financed through grants. The Fund has financed important initiatives consistent with the Government’s strategy for agriculture and rural development. The operations consist of eight loan-funded development projects with a total value of USD 204.5 million. IFAD is currently financing a portfolio of three projects in Jordan with a total value of USD 14.34 million of loans and grants with a co-financing of around USD 10.4 million, addressing agricultural resources management, rural economic growth and employment, irrigation technology and biodiversity. IFAD has also been managing the implementation of projects financed by GEF grants to pilot some innovative approaches related to water use efficiency and sustainable land management. A grant in December 2015 was utilized by the Jordan River Foundation to enhance food security for communities in and around the Zaatari refugee camp. Jordan is also benefitting from a number of IFAD-supported regional grants.

59. The key lessons learned from IFAD’s investments in Jordan:

(i) Projects have to be tailored to the realities of the context in which the poor operate for them to be relevant;

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34 MFIs are currently undergoing licensing by the Central Bank of Jordan. This process is expected to be completed by the end of 2017.

35 The loan facility offered by IFAD was not utilized by the country from 2009 until the country started to borrow again in 2015.
(ii) Proposed project activities must represent real value for the targeted communities to elicit their interest and participation;

(iii) Developing a proper targeting strategy to guide project design and implementation is key to ensure inclusiveness, reach out to IFAD target beneficiaries and avoid elite capture;

(iv) Organizing women’s groups to undertake activities collectively provides an added measure of support to them given their disadvantaged socio-economic conditions;

(v) Provision of financial services through an established development finance or MFI requires that the project follow the loan procedures, policies and risk mitigation strategies of the financial institution;

(vi) Jordanian Banks and MFIs with their excellent performance and strong social focus are well positioned to serve IFAD’s clients since projects implemented by the government financial service providers have not led to higher financial inclusion of project beneficiaries or to scaling up results;

(vii) The slow rate of adoption of technology in the agricultural sector partly stem from public extension service operating with conventional approach and limited effectiveness, this calls for considering new approaches such as commercialization of the services;

(viii) Establishing effective partnerships between Government, international organizations, civil society and private sector can improve results significantly and ensure better project impact; and

(ix) The necessity of using a participatory approach cognizant of the traditional tribal social system of the Bedouin tribes, where traditional norms on land and water management are still prevalent.

60. **Project adherence to IFAD policies.** As clearly indicated in Appendix 12, SIGHT is fully aligned with IFAD Strategic Framework 2016-2025, and NEN’s 2016 Country Strategic Note for Jordan. The project activities, implementation arrangements and M&E system is designed in compliance with the following IFAD’s policies and strategies: (i) Targeting; (ii) Gender Equality and Women’s Empowerment; (iii) Mainstreaming Nutrition in Agriculture Action Plan; (iv) Rural Finance; and (iv) Private-Sector Development and Partnership Strategy.

61. **Environmental and social category.** SECAP Note has analyzed the complex interactions between environmental, socio-economic and political factors impacting rangeland resources and the livelihoods of rural population depending on small ruminant production in the target areas: land tenure and governance conflicts; feed scarcity for livestock and high dependence on subsidized imported fodder; number of animals exceeding carrying capacity; current crisis with the Syrian refugees that can increase the stress on the use of natural resources, lowering government ability to improve life standards of certain sectors of the population. The project has fully integrated SECAP recommendations into design and has proposed a theory of change to address the socio-economic and political barriers behind the unsustainable management of natural resources, and the growing scarcity of fodder and water resources due to climate change predictions: (i) the sustainable use and restoration of pastures in the reserves will be subject to compliance with the effectively demonstrated rotation-resting governance system, which, in return, will improve ecosystem services for the benefit of biodiversity, watershed water balance, and economic benefits for smallholders based on rangeland products (e.g. enhancing carrying capacity, palatable native species in these fragile eco-systems, seed collection, medicinal plants); (ii) growing water constraints will be overcome through investments in water harvesting infrastructures for livestock and fodder crops, and soil water storage technologies for crop production and rangeland restoration, which are tested and validated under previous IFAD and other donors' projects; (iii) planting better adapted crop species and varieties – which will reduce smallholders’ dependence on subsidized imported barley and wheat bran for livestock; (iv) the promotion among beneficiaries of less number of animals from improved breeds that can be considered efficient feed converters, together with the necessary health services, will help reduce feed costs and the pressure of grazing on natural rangelands; and (v) project resources to enhance the institutional and technical skills of the project beneficiaries to improve rangeland management, small ruminant production, processing and marketing, and to diversify their business opportunities, will raise the adaptive capacity of both Syrian refugees and host communities.
62. **Environmental and social category.** The project is classified as a category B operation. SIGHT will be used as a vehicle to upscale and expand the successful work on sustainable natural resources management of previous IFAD projects (e.g. efficient soil conservation and soil water harvesting for crop production and rangeland restoration under ARMP and GEF; efficient micro-pressurized irrigation and treated-waste water use for agriculture under GEF), and on the setting up of effective communal governance systems in rangeland reserves (e.g. IUCN-ROWA, UNDP, USAID) including income generating activities for women. The rationale and justification of SIGHT recognises that main constrains that need to be addressed to improve livestock productivity and build the resilience of socio-ecosystems in the target areas include inadequate animal feeding due to overexploitation of pasture resources, insufficient fodder production locally with too high dependence on subsidized imported feed, low performance breeds and poor animal health, and insufficient availability of water resources. The proposed SIGHT approach seeks to address these constraints through a model for crop-livestock integration in/around rangeland reserves, including investments in sustainable rangeland management and restoration, rainwater harvesting for livestock and fodder crops, and water-saving technologies for fodder production, together with the promotion of improved livestock breeds and vet services.

63. **Climate risk category.** The project qualifies for Moderate Risk, provided it fully integrates the CC adaptation recommendations for livestock and fodder production, proposed by the Government in the Third National Communication (TNC) to the UNFCC, namely the increase of water harvesting infrastructure, the use of drought- and salinity-resistant fodder species and varieties already tested and validated, the use of micro-catchments for soil conservation and runoff water harvesting, and the use of drip irrigation and waste treated water for fodder production and rangeland restoration. According to the TNC (2014), the overall CC vulnerability assessment for the agriculture sector in Jordan falls in the categories of moderate and high, with a “moderate” score for the increase frequency of droughts, especially in the highlands that characterize the target governorates. High vulnerability is mainly related to the low adaptive capacity of poor farmers who are expected climate-driven disruption of livelihood options (e.g. reduced livestock and pastures’ productivity, as well as fodder and water availability) in the absence of adaptation measures. Therefore, the project will invest significant resources to enhance the institutional and technical capacity of existing CBOs and local governance platforms for climate-resilient livestock/rangeland management and fodder production, through the recruitment of experts and the permanent assistance of three Farmer Support Teams (FSTs) that will assist them with training, facilitation and advisory services on full time basis.

64. **Project adherence to FARMS.** The project and FARMS are aligned in terms of geographical coverage, overall goals, development objectives, outcomes and financing plan. More than 76% of Syrian refugees are located in the three out of six project governorates and constitute 52%, 12% and 7% of total population in Mafraq (poorest governorate in Jordan) Irbid and Amman governorates, respectively. SIGHT will help 2,850 vulnerable women and youth from among the Jordanian host communities and Syrian refugees with grant-based income generating packages for on-farm and off-farm activities. This is fully aligned with FARMS overall goal of ensuring that poor rural people in host areas overcome poverty through remunerative, sustainable and resilient livelihoods for both displaced people and host communities.

### III. Project implementation

**A. Approach**

65. The SIGHT project will be implemented over six years to allow for the initiation and proper implementation and consolidation of some of the investments that are undertaken as part of the effort to develop and strengthen the small-ruminant sector, graduate host communities and Syrian Refugees out of poverty and for the formal financial sector to engage with rural and agriculture lending with a particular focus on livestock in a sustainable manner. The project identifies broad directions and guidelines in the design document, which will be formalized in the Project Implementation Manual but leaves sufficient **flexibility to enable the project**
management to address the constraints, and opportunities that emerge during implementation.

66. The project implementation arrangements have been designed in a manner that will strengthen Government capacity for implementation of the project for sustainability. The main agencies implementing the project will be existing government departments and agencies with the mandate to undertake the specific tasks assigned to them. Service providers and NGOs will only be used in their area of expertise and will work in close cooperation with the Government. The project also builds on the concept of public-private partnership in keeping with overall Government policy for developing new and innovative implementation modalities in the design and implementation arrangements of the project. This approach also recognizes the fact that the development of the small-ruminant sector requires close participation between the public services, smallholder and elite farmers, farmer cooperatives as well as the range of private sector players along the livestock value chain. Thus the project focuses on breed improvement, nutrition and animal health, traceability and tagging, quarantine facilities for improved marketing. The project will strengthen public sector capacity, regulation and policy for the livestock sector, which fall in the public domain. At the same time the project recognizes that the public sector cannot provide comprehensive coverage for many of these aspects particularly breed improvement without the participation of the private sector and the smallholder farmers. Thus the project will involve them in breed improvement and dissemination. Similarly, for rangeland improvement the project will work to capitalize on the combined strength of MoA and NCARE with close involvement of the tribal communities without whose participation rangelands cannot be developed. The project design also recognizes that without the participation of commercial sector banks and MFIs, access to financial services to the agriculture and rural sector cannot be provided on a sustainable basis. Thus the approach is to enhance the risk appetite and confidence of the commercial sector so that they begin to provide financial services to this segment of the population on a sustainable basis.

67. Poverty targeting approach. The project will benefit small ruminant holders nationwide through support for policy engagement and technical and institutional strengthening of Ministry of Agriculture to support small ruminant farmers. In its policy engagement, the project will focus on incorporating the perspective of poor smallholder women and men farmers and ensure that their interests are promoted. The project will have a sharp poverty and vulnerability focus in targeting the graduation packages. Women and youth will be prioritized for the graduation out of poverty grants. The project will be implemented in a manner that will be sensitive to their constraints and will encourage their participation. However, SIGHT will have a strong poverty, vulnerability and gender focus. The project will focus on the poor smallholder small ruminant farmers, the Jordanian host communities most affected by the by the influx of Syrian refugees and the highly vulnerable Syrian refugees. The presence of smallholder ruminant farmers and Syrian refugees will be criteria for selection of governorates and villages within the governorates. The project will further sharpen its poverty focus by conducting a targeting exercise in these areas using poverty criteria to identify beneficiaries for sustainable livelihoods in an objective and transparent manner.

68. Geographical targeting. SIGHT will be implemented in the six Governorates of Mafraq, Irbid, Jerash, Ajloun, Madaba and the outskirts of Amman. Project activities will be clustered geographically as far as possible to promote efficiency in delivering services, synergies and impact. However, within these Governorates, the project interventions for livestock farmers such as provision of training and extension services will principally be attractive for small-holder ruminant farmers who face challenges with feeding their animals, limited knowledge of animal management practices and resource constraints. The micro and small loans are also likely to be attractive to smallholder farmers and micro-entrepreneurs. Thus the project will follow a demand driven and self-selection approach.

69. The gender strategy of the project will be based on lessons from projects effective in the inclusion of women and the experience of projects in the livestock sector regarding interventions that can increase women’s productivity and incomes, enhance their decision-making and control over productive assets and lead to their empowerment. Successful
participation of women from poor rural households entails an approach that does not add to their transaction costs and yields real benefits for them. It also requires gender sensitivity to existing household division of work with respect to the management of livestock and dairy production. The empowerment of women will be ensured through a range of strategies that have been outlined in Appendix 2 and are designed to enhance the participation, empowerment and productive capacity of women.

B. Organizational framework

70. **Overview of Institutional Landscape.** Several national institutions are involved in the development of the livestock and rural finance sectors and in working with host communities and Syrian refugees to deal with the crisis that this represents. In the provision of technical support services to agriculture in general and specifically to the smallholder livestock producers and traders two organizations are predominant and play a complementary role. These are Ministry of Agriculture and the semi-autonomous National Centre for Agriculture Research and Extension (NCARE), which is leading in agriculture research and implementation of specific projects in Jordan. Other ministries and institutions that will play important roles in SIGHT are the Ministry of Planning and International Cooperation (MOPIC) and the Central Bank of Jordan (CBJ) and commercial banks willing to partner with CBJ and the Jordan Guarantee Corporation to provide financial services to the target beneficiaries of the project. There are several banks providing conventional loans and Sharia compliant products who have indicated their interest in the project and are expected to participate in the project.

71. The project will also competitively select a service provider to work with the project in the graduation programme. The service providers will be selected from those NGOs who have experience of working with the poor and low income households in Jordan and Syrian refugees and also have experience of working with the Graduation Approach. These NGO could be selected from among several working in Jordan such as CARE International, Jordanian Hashemite Fund for Human Development (JOHUD), the Jordan River Foundation (JRF), Danish Refugee Council, etc., Formal or informal arrangements will also be made with international agencies, e.g. FAO, UNHCR, EBRD and ICARDA, as needed. Some of these organizations were involved in the design process and provided key information for the project.

72. The **Ministry of Agriculture (MoA)** will be the main agency responsible for the implementation of the SIGHT project. A **Project Steering Committee (PSC)** will be established for the project. The PSC established at the MoA to guide all agriculture related internationally financed projects will also act as the Steering Committee of the project. The PSC will comprise representatives of MOA, NCARE, CBJ, and selected institutions. The Project Director will be the PSC secretary. ICARDA, JOHUD etc. and other NGOs, and other implementation partners will be invited by the Secretariat as needed. The responsibilities of the PSC will include: (i) ensuring the project's activities are implemented in compliance with the Government's policies and the terms and conditions of the Loan documents; (ii) approving the AWPBs, (iii) ensuring the project interventions are well coordinated with other development programmes and projects; (iv) broad oversight of project implementation; and (v) guiding project implementation in policy and strategy matters. The PSC Chair will invite any other stakeholder to attend and contribute to PSC deliberations when discussing matters of relevance.

73. A dedicated **Project Management Unit (PMU)** will be established within the MOA Headquarter premises in Amman and work under the direct overall supervision of the General Secretary at MOA Headquarters in Amman. A **Technical Coordination Committee** chaired by the Project Director and composed of the PMU staff and MoA and NCARE Field Managers at the breeding stations and Governorates and District Directorates of MoA and partnering NGOs and Financial Service Providers (FSPs). It will meet monthly in the first year of implementation and quarterly in subsequent years or as needed. Its main task will be to provide technical guidance and ensure that all technical aspects of the project are well coordinated and synchronized with the strategic plans of the Government and also sound from a technical perspective.
74. The PMU will undertake the day-to-day management and implementation of the project. It will have a core team of staff to supervise and monitor all project activities. Specialized staff will be recruited on a competitive basis, or seconded by MoA based on job descriptions for the following positions: (i) Project Director; (ii) Programme Officer, responsible for Component 1 and overall field implementation; (iii) M&E Specialist; (iv) Procurement Specialist; (v) Financial Management Specialist; (vi) Gender and Livelihood Specialist; and (vii) Driver. All contracted staff will be hired through a competitive process, subject to IFAD’s No Objection. The Project Director may be removed only after prior consultation with IFAD. The Project Director will report to Secretary General and will be responsible for the efficient operation of the PMU and day-to-day project implementation in accordance with the AWPBs. The SIGHT financial management team, vested with financial and administrative autonomy, will be part of the PMU. This team will be seconded from among MoA staff, subject to IFAD no-objection based on staff profiles described in the PIM.

75. The principal functions of the PMU will be to carry out the overall programming and budgeting of Project activities, and take the lead in: (i) project implementation in cooperation with a range of implementing partners, including Participating Financial Institutions and service providers; and (ii) monitoring and documenting progress. It will be responsible for overall management, including coordinating and monitoring of project implementation and: (i) developing the Project Implementation Manual; (ii) developing Annual Work Plans and Budgets (AWPBs) for submission to the PSC; (iii) financial management (managing the project’s Designated Account, disbursement, preparation of withdrawal applications); (iv) procurement, contracting and contract management; (v) ensuring the project benefits reach the target group; (vi) monitoring and evaluation, progress reporting on project implementation, and knowledge management; (vii) organising the annual project audit; and (viii) coordination and liaison with the Government and other implementing partners and IFAD.

76. The Unit will work closely with the relevant departments in NCARE and MoA, specifically its Animal Resources Department, Rangeland Department and the staff at the Governorate level in the implementation of the project. The Directorates of Agriculture in the target Governorates will be involved in supporting the implementation of specific activities based on their geographic locations and the description of support needed as detailed in the PIM. At the field level, MoA and NCARE will assign appropriately qualified staff to the PMU ensuring that relevant competencies are identified and that full-time availability is guaranteed.

77. The MoA is also implementing the GI programme financed by the Hashemite Fund for the Development of Jordanian Badia (HFDJB) with whom coordination will be facilitated by their participation at the technical level in the technical committee of the project as and when required. The Cooperative Corporation representatives at the Governorate level will be expected to identify farmer cooperatives involved in the livestock sector for implementation of specific aspects of the project which require close collaboration with farmer groups and cooperatives.

78. Provisions are made for studies, surveys, technical support and training for the design and operation of the project M&E system. The PMU will ensure the timely recruitment, competitive selection and establishment of MOUs, agreements and contracts between MoA and NCARE and implementing partners such as CBJ, NGOs, CBOs, HFDJB and service providers for the graduation programme, advisory services and technical skills. Short-term technical expertise will be used as and when required from the existing pool of specialists from MOA, NCARE, and the universities. Recruitments from the private sector, as needed, will be based on TORs prepared by the PMU and approved by IFAD.

C. Planning, M&E, learning and knowledge management

Planning

79. The management and implementation of SIGHT will be based on the recognition that IFAD’s interventions will produce better results when planning, monitoring, reporting and knowledge
sharing focus explicitly on key measures. The Project’s key planning instruments will be the Annual Work Plan and Budget (AWPB) that is an essential covenant in the legal Financing Agreement. The purpose of the AWPB is to provide a well-structured set of scheduled activities, together with their respective budget/inputs for the Project Management Unit (PMU) to guide staff and implementing partners on the timelines for the different components, sub-components and their associated set of activities. The AWPBs will be prepared, discussed and approved no later than 60 days before the end of the fiscal year, and become effective after clearance by IFAD. The inclusion of the in-kind contribution of Government will be budgeted in the GoJ annual budgets to ensure that there is sufficient allocation for the operation and maintenance of the facilities being strengthened under the Project.

Monitoring and evaluation

80. Project monitoring will be conducted in accordance with IFAD procedures. The Project Logical Framework (LF) provides indicators for the main outcomes and outputs expected under each component along with their corresponding means of verification. These will form the basis on which the project’s Monitoring and Evaluation (M&E) system will be built. The system will generate quantitative and qualitative verifiable information on the project’s performance in a form that will assist the MOA and the PMU to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action during implementation. Once the PMU is established, the M&E Specialist of the PMU will develop the system based on the indicators specified in the Log-Frame and in keeping with IFAD’s revised RIMS framework to enhance the measurement of IFAD’s results at the outcome level. The monitoring and evaluation indicators will be disaggregated by gender. The overall responsibility for the M&E activities will lie with the Project Director who is assisted by the M&E Specialist in preparing all progress and monitoring reports.

81. **Baseline survey.** At the beginning of implementation, the project will undertake a baseline survey that will establish the baseline data to assess the socio-economic status of the project area and to measure selected monitoring indicators before the Project commencement. The result of this will be systematically recorded to allow for a comparative assessment during the Project life.

82. **Mid-term review (MTR).** A midterm review will be carried out towards the end of 3rd year. The review will cover, among other things: (i) physical and financial progress as measured against AWPBs; (ii) performance and financial management of contracted implementing parties; and (iii) an assessment of efficacy of technical assistance and capacity building activities.

83. **Final evaluation.** An independent Final Evaluation will take place three months prior to the project completion date, and will not only focus on the same issues as the mid-term evaluation but will also assess the impact and sustainability of results. The M&E data collected over the project implementation period will be used as part of a thorough assessment of project achievements for the preparation of the Project Completion Report/Impact Assessment.

Learning and knowledge management

84. Given the instrumental role of knowledge management in improving the breeding of Awassi sheep and sharing good breeding practices from public owned livestock breeding stations to elite farmers, smallholders and cooperatives, the compilation and dissemination of Project information, experiences and results on a regular basis will be crucial. Other Innovations and best practices such as the implementation of the traceability system through the digitized system, the participation of farmer cooperatives and entrepreneurs in improved feed production, community participation in the development of range reserves and the impact of watering points, will all need to be captured in learning notes and through case studies. One of the most important innovations of the SIGHT project will be in the initiation of a comprehensive approach to graduation in the country for the host communities and Syrian Refugees. Lessons from these projects will be documented outlining the process, the value for money metrics and the potential for replication and scaling up.
85. Knowledge Management activities of the PMU will produce relevant thematic communication materials that are evidence based, derived from Project implementation and lessons learned. Links established with local farmers and community based organizations at the governorates’ level will be shared by the FSTs and by project staff. The project will package and disseminate information through various channels; text-based print medium (brochures, leaflets, newsletter etc.) mass media (e.g. TV, radio, Internet), training and educational programs (e.g. workshops, skill development programs, joint learning events). The overall responsibility for knowledge management and communication will belong to the Project Director and M&E Specialist. The Project Steering Committee will be responsible for identifying policy lessons and ensuring that these are communicated appropriately. The Project Steering Committee will play a key role in reviewing the lessons and identify outcomes to initiate policy interaction with government counterparts.

D. Financial management, procurement and governance

86. Overall risk assessment. The country risk is rated as Medium. Transparency International’s Corruption Perception Index ranked Jordan 57th out of 176 countries in 2016 with a score of 48/100. The 2011 PEFA report identified several continuing weaknesses in the institutional capacity of the PFM sector. While acknowledging the increased coverage of the Treasury Single Account (TSA) system, it was noted that: (i) government deposits with commercial banks had recently increased; (ii) there were numerous special bank accounts for project specific external loans and grants outside the TSA; (iii) cash management was still mainly through cash-rationing, albeit the cash flow forecasting had significantly improved; and (iv) there was no functioning commitment control system. The internal control functions needed to be upgraded and modernized. Internal audit was seen as being primarily concerned with pre-audit of transactions and 100% check rather than sampling and systems review. A 2017 PEFA assessment has been conducted for Jordan but has not yet been made public.

87. Financial management. The SIGHT financial management team will be part of the PMU, and will be fully embedded and located within the MoA, and vested with financial and administrative autonomy. The financial team will be seconded from MoA staff which will be subject to IFAD no objection on proposed profiles, GoJ will second competent staff to the PMU ensuring that relevant competencies are identified and that full-time availability is guaranteed. The borrower/recipient will open two (2) USD denominated Designated Accounts (DAs) for the IFAD loan and the IFAD grant from FARMS Facility at Central Bank in order to receive IFAD loan and grant resources. The detailed procedure for the operation of these accounts, the generating of financial reports and the preparation of withdrawal applications and statements of expenditure as per IFAD reporting requirements and will implement the IFAD Client Portal when it becomes available. As condition for the first disbursement, the project will prepare a draft Project Implementation Manual (at minimum the fiduciary part), acceptable to IFAD, including financial, accounting, procurement and administrative arrangements for project activities. AWPPs showing all activities planned during the given year, disaggregated by quarter and by financier, should reach IFAD 6 months before the beginning of each fiscal year. The flow of funds and the details of the accounts re detailed in the Financial Management Appendix 7.

88. Counterpart funding. The GoJ contribution to project costs will be in the form of tax exemption, and in kind contributions (essentially office space and utilities, and compensation part of salaries for seconded staff as well as the operation and maintenance of the facilities supported and strengthened under the project. The project end-beneficiaries will participate in the project costs in the form of in kind contributions.

89. Audit. The annual external audit of the project will be carried out by private audit firm retained based on competitive selection, in accordance with the International Standards on Auditing and the IFAD Guidelines for Project Audits and based on terms of reference subject to IFAD no objection. In addition to external audit activities, the internal audit unit of MoA will include the review of the transactions of IFAD project as legal mandatory requirements. The transactions of

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36 PEFA is a tool for assessing the status of public financial management at a given point in time.
IFAD project will be also reviewed by the permanent team of Jordan Audit Bureau (SAI) based at MoA.

90. **Procurement.** Jordan’s public procurement system is a highly centralized, well defined system governed by the Government Tenders Directorate (GTD) of the Ministry of Public Works and Housing (MPWH) for civil works and consultants’ services and by the General Supplies Department (GSD) of the Ministry of Finance (MOF) for supplies, equipment and furniture. Award of the majority of public contracts is based on competition with contract award generally made on the basis of the lowest priced acceptable offer, but for consultants, a weighting formula is used. Both private and public participants consider the overall risk associated with corrupt practices affecting public procurement in Jordan low. During the design mission, the capacity of the Implementing Agency- the Ministry of Agriculture (MoA) was assessed and MoA was judged to be capable of carrying out and managing the procurement under this financing, provided that the recommended actions as specified in Appendix 8 are implemented. The procedures for goods and services procurement are described more fully in Appendix 8.

91. **Governance.** The primary responsibility for detecting fraud and corruption lies with the Borrower. However, the project should note that IFAD applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. The dissemination of IFAD’s anti-corruption policy amongst project staff and stakeholders, as well as the adoption of IFAD procurement guidelines for SIGHT procurement will reinforce the use of good practices. In addition, SIGHT will promote good governance through the involvement the following; (i) the preparation of the annual work plans and budgets; (ii) the adoption of proper procurement processes; and (iii) the monitoring and evaluation of project activities; and (iv) regular internal and external audits.

E. **Supervision**

92. SIGHT will be directly supervised by IFAD. The first implementation support mission will take place soon after effectiveness and first disbursement and will include an M&E specialist. IFAD will conduct one annual supervision a year. The composition of the mission will be based on the need for technical backstopping and support of the different project components. The specific elements of the project which require careful assessment is the (i) breeding plan of each station; (ii) relevance, efficiency and effectiveness of training programs for lead farmers and farmer organizations, effectiveness of demonstration programs; (iii) efficiency and effectiveness of FSTs and complementarity with the work of government staff; (iv) recording and updating of data on livestock tagging and traceability; (v) the approach and efficacy of the rangeland reserve regeneration; and (vi) Road Map preparation for the trade mark/registry system of Awassi sheep. Under the second component the elements requiring proper supervision will include the following: (i) the choice and selection of service providers for the graduation programme and the financial services; (ii) selection of beneficiaries and their profiles for both graduation and access to finance; (iii) potential barriers to the success of the graduation programs for refugees; (iv) status of incorporation of host communities; (v) relevance, efficiency and effectiveness of refugee training programs; and (vi) the types of collateral, interest rate and financial products made available to rural finance beneficiaries.

F. **Risk identification and mitigation**

93. The Key risks identified for the project and its mitigation measures have been identified in the matrix below.
Table 2: Risks and Mitigation Measures

<table>
<thead>
<tr>
<th>Main risks</th>
<th>Potential mitigation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient number of elite Awassi sheep and Shami goats in domestic markets (to initiate breeding programme).</td>
<td>• Early market research and options for imports examined.</td>
</tr>
<tr>
<td>Insufficient and inadequate field staff, specifically to perform the breeding program and high staff turnover.</td>
<td>• Incentives provided by SIGHT to attract, motivate and maintain field staff.</td>
</tr>
<tr>
<td>Lack of robust livestock cooperatives and herder associations as partners for the open nucleolus (ONBP) breeding programme.</td>
<td>• Careful screening and early capacity building for Breeding Partners in collaboration with the Cooperative Corporation at the Governorate level.</td>
</tr>
<tr>
<td>Negative impacts of climate change on natural resources, in particular on declining animal health and productivity; reduced water availability in the pastures and for forage/crop and production.</td>
<td>• Training herders and farmers on forage and silage production at farm level to reduce dependence on grazing land.</td>
</tr>
<tr>
<td>Lack of refugee motivation experience and willingness to invest in livelihoods locally as opposed to aspirations to return to their home country</td>
<td>• Confirming that candidates are residents of local communities rather than refugee camps.</td>
</tr>
<tr>
<td>Economic or political constraints for Syrians such as legal barriers for refugee employment or economic participation.</td>
<td>• Supporting investments in transferrable assets (e.g. livestock) to those with agricultural skills, to create opportunities for potential reintegration into their countries of origin.</td>
</tr>
<tr>
<td>Elite capture of project activities without benefits to the rural poor.</td>
<td>• The public will be informed about the project through awareness campaigns and eligible individuals and groups will be encouraged.</td>
</tr>
<tr>
<td></td>
<td>• The criteria in most concrete engagements will directly favour the poor or farmers/enterprises that can generate jobs for the rural poor. Clear selection criteria will be included in the Project Implementation Manual.</td>
</tr>
<tr>
<td></td>
<td>• Regular M&amp;E will focus on benefits accruing for the poor—either directly or indirectly.</td>
</tr>
</tbody>
</table>

IV. Project costs, financing, benefits and sustainability

A. Project costs

94. Over the six-year period, the total project cost is estimated at USD 23.99 million including price and physical contingencies. Component 1: Investment in farmer services is expected to cost USD 8.429 million. Component 2: Livelihood Investments and access to financial services is expected to cost 13.63 million. Project Management is estimated to cost USD 1.93 million. Table 3 below provides the component and sub-component cost breakdown. Details of the budget are given in Appendix 9.
Table 3: Project Cost by Component and Financier

<table>
<thead>
<tr>
<th>Component</th>
<th>Government</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Investment in farmer services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Enhancing public services</td>
<td>2,183</td>
<td>48.8</td>
<td>2,181</td>
<td>48.7</td>
<td>-</td>
</tr>
<tr>
<td>2. Improving community and private services</td>
<td>1,939</td>
<td>49.9</td>
<td>1,442</td>
<td>37.1</td>
<td>184</td>
</tr>
<tr>
<td>3. Support to policy engagement</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>70</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4,122</td>
<td>48.9</td>
<td>3,623</td>
<td>43.0</td>
<td>184</td>
</tr>
<tr>
<td>B. Livelihood investments and access to financial services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grants for graduation into sustainable livelihoods</td>
<td>229</td>
<td>2.4</td>
<td>-</td>
<td>-</td>
<td>9,502</td>
</tr>
<tr>
<td>2. Lending facility for rural businesses</td>
<td>-</td>
<td>-</td>
<td>3,900</td>
<td>100.0</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal</td>
<td>229</td>
<td>1.7</td>
<td>3,900</td>
<td>28.6</td>
<td>9,502</td>
</tr>
<tr>
<td>C. Project management</td>
<td>340</td>
<td>17.6</td>
<td>877</td>
<td>45.4</td>
<td>715</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>4,690</td>
<td>19.5</td>
<td>8,400</td>
<td>35.0</td>
<td>10,400</td>
</tr>
</tbody>
</table>

B. Project financing

95. The project will be financed by an IFAD loan of USD 8.4 million, an IFAD grant of USD 0.5 million. The Facility for Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) will co-finance the project with a grant of around USD 3.9 million. There is a financing gap of USD 6.5 million, which IFAD will try to address by mobilizing additional grant resources from co-financiers through FARMS. The Swiss Development Cooperation has pledged an amount of USD 2.5 million as a contribution to this financing gap – IFAD will receive confirmation by mid-July. The financing gap will not impact the core activities of the project as the financing has been structured in such a manner that if additional financing can be mobilised it will be used to provide support to 2,600 women and youth from among the Syrian Refugee families and host communities to enable them to graduate out of poverty through concentrated support.

96. The Government’s in kind contribution is estimated at USD 4.690, which is equivalent to 24% of the financing from IFAD and FARMS and 50% of component 1. Specifically, the GOJ contribution will include: (i) the time of senior Government staff in the PSC and Technical committees; (ii) provision of PMU offices and their maintenance; (iii) part-time procurement and financial management specialist positions; (iv) the use of existing Government field support teams; (v) the Government staff working in the breeding stations, training centre, on traceability, GI and rangeland reserves and Government staff at the Governorate level; and (vi) the operating and maintenance costs that will be incurred in operating the public sector facilities such as its breeding stations, quarantine facilities, diagnostic laboratories, tracking system and GI and rangeland programme, etc.

C. Summary benefits and economic analysis

97. Project benefits. The specific benefits of the project from Component 1 include the establishment of a breeding plan which can help in enhancing the productivity of small-ruminants across the country in partnership with elite farmers and farmer cooperatives, provision of advisory support, improved access to nutrition and animal health services, strengthening the system of animal traceability, assess the potential for GI and developing the “Awassi Jo” brand and trade mark, establish a community based system for improvement of range reserves. The benefits from Component 2 will include graduation of Syrian Refugees and households belonging to Jordanian host communities out of poverty through building their resilience and productive employment and enterprise development and access to financial services for Jordanian, livestock farmers and rural entrepreneurs especially women and youth.
98. **Number of beneficiaries.** The project is expected to benefit 11,920 farming households or 57,216 beneficiaries. The project will benefit 11,920 households of whom 2,025 will be Syrian Refugee households. The beneficiaries of many of the activities have not been estimated due to the difficulty of estimating them at this stage such as the beneficiaries of the rangeland improvements, policy advocacy and extension and vaccination services or those who will benefit from the quarantine and diagnostic and improved tracking and tagging facilities. The project will directly target 7,720 small ruminant farming households with herds of up to 200 animals interested in improving the productivity of their herds. These small ruminant farmers will primarily be from Jordanian host communities and will constitute nearly a quarter of the households involved in small ruminant farming in Jordan. In addition, the project will provide a graduation programme for 3,650 vulnerable women and youth from among the Jordanian host communities and Syrian Refugees with grant-based income generating packages for on-farm and off-farm rural enterprises to enable them to graduate out of poverty. The project will also provide 550 smallholder farmers with micro and small loans for rural on-farm and off-farm businesses, generating additional employment. Table 4 below gives a summary of the beneficiaries of the various components.

<table>
<thead>
<tr>
<th>Component</th>
<th>Total Households</th>
<th>Syrian Refugee (HHs)</th>
<th>Total Beneficiaries</th>
<th>Syrian Refugees (Individuals)</th>
<th>Women</th>
<th>Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investment in Farmer Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Enhancing public sector services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Improving community and private sector services</td>
<td>7,720</td>
<td></td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
</tr>
<tr>
<td>1.3 Support to policy engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Component 1</strong></td>
<td>7,720</td>
<td></td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
</tr>
<tr>
<td>2. Business Development and Access to Financial Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Grants for graduation into sustainable livelihoods</td>
<td>3,650</td>
<td>2,025</td>
<td>17,520</td>
<td>10,125</td>
<td>1,825</td>
<td>913</td>
</tr>
<tr>
<td>Poor</td>
<td>2,650</td>
<td>1,325</td>
<td>12,720</td>
<td>6,625</td>
<td>1,325</td>
<td>331</td>
</tr>
<tr>
<td>Extreme Poor</td>
<td>1,000</td>
<td>700</td>
<td>4,800</td>
<td>3,500</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>2.2 Lending facility for rural businesses</td>
<td>550</td>
<td></td>
<td>2,640</td>
<td></td>
<td>165</td>
<td></td>
</tr>
<tr>
<td><strong>Total Component 2</strong></td>
<td>4,200</td>
<td>2,025</td>
<td>20,160</td>
<td>10,125</td>
<td>1,990</td>
<td>913</td>
</tr>
<tr>
<td><strong>Total Project beneficiaries</strong></td>
<td>1,1920</td>
<td>2,025</td>
<td>57,216</td>
<td>10,125</td>
<td>5,078</td>
<td>1,888</td>
</tr>
</tbody>
</table>

99. **Economic Rate of Return.** In order to represent the project financial benefits, eight financial models were prepared and used as the building blocks for the economic analysis. These models can be grouped as follows: (i) one livestock model to show benefits deriving from improved breed, enhanced public and private services and technical assistance; (ii) three activity models to represent potential activities in which Jordanian host communities' households may decide to invest through the graduation programme; (iii) two activity models, specifically representing potential activities for Syrian refuges household and the impact that they may have on their income; and (iv) two indicative activity models for loan financing. A cash-flow analysis was carried out to present the “with” and “without” project analysis. All

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37 This includes the 1600 households who will be assisted by the additional financing of USD 4 million expected.
38 From the existing funds 1145 Syrian Refugees will be supported and 880 from the additional financing expected.
39 The project will include farmers with up to 200 animals as stakeholder consultations show that in Jordan this size of flock is considered a commercially viable enterprise potentially interested in breed improvement.
models form the building blocks for the economic analysis. The overall economic internal rate of return (EIRR) of the project is estimated at 26% for the base case. The net present value (NPV) of the net benefit stream, discounted at 10%, is USD 50.4 million.

100. **Sensitivity Analysis.** In order to test the robustness of the above results, a sensitivity analysis has been carried out; the outcomes of which are presented in Table 10. The sensitivity analysis investigates the effect of fluctuations in project costs, project benefits, and delays in implementation on the NPV and ERR. It shows the economic impacts that a decrease in project benefits – up to -50% – will have on the project viability. Similarly, it shows how the economic viability of the project will be affected by an increase of up to 50% in project costs, and by a one to three-year delay in project implementation.

<table>
<thead>
<tr>
<th>Assumption Related Risk</th>
<th>ERR</th>
<th>NPV US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project base case</td>
<td>26%</td>
<td>50 449 030</td>
</tr>
<tr>
<td>Decrease in project benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-20%</td>
<td>Failures in the distribution of improved animal stock. Failure of new created businesses. Market price fluctuations. Delays with trainings. Proper use of skills acquired in trainings</td>
<td>25%</td>
</tr>
<tr>
<td>-30%</td>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>-50%</td>
<td></td>
<td>21%</td>
</tr>
<tr>
<td>Increase in project Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td>Market price fluctuations (changes in market demands). Procurement risks.</td>
<td>25%</td>
</tr>
<tr>
<td>30%</td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td>Delays in project implementation</td>
<td>1 year</td>
<td>Delays in having the Project approved by all parties. Any other unforeseeable event.</td>
</tr>
<tr>
<td></td>
<td>3 years</td>
<td></td>
</tr>
</tbody>
</table>

D. **Sustainability**

101. The project is designed to enhance sustainability by establishing strong links within and across all components’ activities. The synergies created between the investments for infrastructure and capacity building and the innovative options for graduation and access to rural finance underpinned by strong partnership are designed to sustainably improve livelihoods of men and women small holders and the Syrian refugees. Improved infrastructure and strengthened technical capacity of the selected breeding stations will allow sustainable scaling up of the national sheep and goat breeding program. The sustainability of the improved breeds on-farm will be enhanced by the investments in strengthening veterinary diagnostic laboratories and AI, animal health services, and targeted capacity building programs for livestock owners and upgrading of the NAIS. The sustainability of Jordan’s livestock exports depends on the reliability of quarantine, disease diagnosis services and eventually on its system of traceability. Investments at MoA’s Quarantine and Animal Health Certification Facility in Mafraq will contribute to the upgrading of the trans-boundary disease control services and prevent loss of export markets, associated revenue and illegal livestock exports.

102. **Environmental sustainability.** The SIGHT’s piloting of investments for rangeland reserves and working closely with other partners such as NCARE and IUCN will further strengthen the approach being used. The reinforcement of community and local participatory platforms and the integration and up scaling of lessons learned from previous IFAD and other organizations’ climate resilient agronomic practices will ensure sustainability. Establishing partnership frameworks with other organizations will contribute to the SIGHT’s sustainability by ensuring synergies and cross fertilization between the Project’s investments and partners’ efforts to build robust community models and local governance platforms for natural resource management.
These will be further strengthened through identification of those elements of policy and regulation that can assist in regeneration of rangelands.

103. **Financial sustainability.** The project will be implementing the innovative *Graduation into Sustainable Livelihood Approach* with proven success rates of 75-98%. IFAD’s intervention will be complementary to the activities of Jordanian and international NGOs working with low-income people and refugees in the country. A comprehensive package of support, mentoring and skills development is expected to help the rural poor Jordanian host communities and Syrian refugees develop sustainable sources of livelihood. The financial services under the project will be provided through the Central Bank of Jordan which has a successful track record of managing lending facilities of several multilateral and international organizations. The SIGHT project will use the existing institutional mechanisms to enhance the sustainability of lending to the agricultural sector and rural businesses by encouraging the commercial banks to explore this line of financing by building their confidence and risk appetite for it. Participating financial institutions will be encouraged to develop new agricultural or rural finance products as part of their regular offerings and thus helping sustain and expand sectoral lending activities in Jordan. IFAD’s on-going REGEP project has provision for technical assistance for financial institutions for the purpose.
Appendix 1: Country and rural context background

1. The Hashemite Kingdom of Jordan is located at the heart of the Middle East shaped with its geography, history, geopolitics and scarcity in natural resources. The population that was 6.249 million in 2015 is estimated as 7.748 million for 2016 due to the influx of Syrian refugees. The surface area of the country is 89,319 sq. km. and the population density is 87.3 per sq. km and the annual average population growth rate for 2010-2015 was estimated to be 3.1%. The country is highly urbanized with only 16% reported to be rural in 2015.

2. Jordan is a middle-income country with a per capita Gross National Income (GNI) of USD 4,680. The country is primarily a service economy with a significant dependence on the public sector. Jordan's market-oriented economy is among the smallest in the region, with insufficient supplies of natural resources. The country receives significant official development assistance, which constituted 7.6% of GNI in 2014 and it has significant outstanding external public debt with the Government debt to GDP ratio of 93.4%. Despite the substantial foreign financial assistance and an abundance of skilled human resources, the national economy faces complex challenges including a high population growth rate, continuing influx of refugees and economic migrants, growing pressure on its natural resource base, increasing scarcity of water resources and the negative effects of climate change. Adverse regional developments, in particular the Syria and Iraq crises, remain the largest recent shock affecting Jordan. This is reflected in an unprecedented refugee influx, in disrupted trade routes, and in lower investments and tourism inflows. The large number of Syrian refugees entering the country is having a strong impact on the country's economy and social fabric. Other major challenges facing Jordan include high unemployment, a dependency on grants and remittances from Gulf economies as well as continued pressure on natural resources.

3. Jordan’s economy remains sluggish as growth slowed down in 2016 for the second year in a row — to an estimated 2% from 2.4% in 2015 — as geo-political repercussions took a toll and as reflected in the worsening labour market indicators. Economic growth is expected to marginally improve to an estimated 2.6% average over 2017-2019 anticipating improvements in tourism, exports, and the impact of investment climate reforms. Inflationary pressures appear after two years of deflation. Fiscal consolidation and monetary policy tightening are expected to continue. Sound economic policies and growth-enhancing reforms will also be necessary to reduce the country’s sensitivity to external shocks. Finally, creating conditions for increased private investment and improved competitiveness will remain indispensable for Jordan to stimulate job-creating growth.

4. Employment. Official data published by the Department of Statistics (DoS) show that the unemployment rate for the third quarter of 2015 reached 13.8%, reversing a drop that had been seen in 2014. Periods of strong growth have not translated into strong job creation for Jordanians. As a consequence, Jordan unemployment rate, especially among youth, has remained in the double digits over the last decade. This affects particularly women who face unemployment rates which are double those of men. For women and men, the estimated ratios for 2016 are 28.9% and 11%, respectively. Young women (age 15-29) in particular suffer from the highest rate of unemployment. For women, agriculture is the major sector where they make
up 65% of the labourers. Under the mounting pressure from the Syrian crisis, the participation of rural women in the sector has declined, and those who do have jobs often put up with difficult working conditions.

5. The service sector has the largest share of employment at about 80% followed by 18.5% for industry and 1.8% for agriculture in 2014. The figure for agriculture does not include casual agricultural labour, home-based income-generating activities and small-scale farming and livestock keeping (mostly small ruminants), which are mainly run by women. The agriculture sector shed jobs for Jordanians and created new ones for the non-Jordanians; however employment in that sector is minimal. Unemployment amongst Jordanians in areas with high concentrations of Syrian refugees, and in northern Governorates in particular, rose from 14.5% to 22.1% between 2011 and 2014. In many cases, Jordanians are out-competed by the refugees who are willing to accept considerably lower wages and poorer working conditions than Jordanians.

6. Agricultural sector currently contributes only about 3.8% of GDP and employment. Despite its small contribution to national GDP, the sector is of importance in Jordan, for its socio-economic fabric, and role in political stability, as well as its central role in food security, rural development, providing job opportunities, and the forward and backward linkages of the sector. More than 90% per cent of the country’s area is described as Badia, which is arid and receives less than 200 mm annual rainfall. Of the remaining 10% only 10% is irrigated. The country has limited land resources and only around 5% of its land area is arable. In terms of water availability, it is one of the World’s water-poorest countries. While farmers irrigate less than 10% of the total land, agricultural water requirement represents about 60% of total national water needs. Agriculture is practiced in three distinct agro-climatic regions: (i) the predominantly rain fed highlands, which produce mainly wheat, barley and some pulses, in addition to fruit; (ii) irrigated farmlands in the Jordan Valley and southern Ghors, which produce fruits and vegetables for the local and export markets; and (iii) the remaining low rainfall semi-desert areas (the Badia) in which livestock-rearing is practiced, though herders number has been continuously decreasing over the past two decades. Jordan is a net food-importing country including wheat, barley, sugar, rice, chickpea, lentils, corn, and vegetable oil (except olive-oil). The major components of agriculture are: horticulture, poultry and small-scale herding. Much of Government of Jordan’s (GOJ’s) domestic agricultural policy is focused on the management of its scarce and rapidly depleting water resources in an effort to support its traditional livestock owners and develop an export- oriented horticultural sector.

7. Small Ruminant Sector. As is the case in other countries of the region, small ruminants play multiple roles in the economy of Jordan, supporting rural livelihoods in terms of food security, and employment while ensuring access to locally produced animal source foods. Sheep and goats are purchased as investments and sold according to cash flow needs and opportunity of making profits. Furthermore, owning a flock of sheep is a social indication of power and prestige. Small ruminants are often the sole source of income and food security for rural households particularly in arid and semi-arid areas. The key constraints in the small ruminant sector’s ability to support rural livelihoods include the following: (i) poor genetic material largely resulting from continuous inbreeding at the smallholder level and limited institutional support to the sector, in terms of providing breeding services, (ii) weak disease management due to limited institutional support for veterinary services; (iii) malnutrition stemming from shortages of locally produced feedstuffs, unaffordability of feed prices, and low productivity of grazing lands; (iv) poor flock management;

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and (v) water scarcity that is further exacerbated by climate change and overexploitation of groundwater particularly in semi-arid areas.

8. The Awassi sheep that is the most popular local breed of sheep in Jordan is a triple-purpose breed for meat, milk and wool. It is a hardy breed that evolved as a nomadic sheep through natural and selective breeding to become the highest milk breed in the Middle East. During a 159-day lactation period, an ewe produces 40-60 kg of milk under traditional production system. This goes up to 70-80 kg of milk per day under improved production systems. The breed is well adapted to harsh environmental conditions and managed under traditionally extensive to semi-extensive conditions. Intensive system is very rare in the country and only found in few government stations and private farms. Many farmers mix sheep and goat in one flock, but raising small ruminants with cattle is rare and found in irrigated areas in limited numbers (home raising). A marketing study undertaken during project design found that each Governorate varies significantly in whether its small-ruminant production system is geared towards meat or dairy production. The demand for wool has gone down significantly due to the conflict in Syria which used to import a large share of the wool for production of woolen products.

9. As a result of frequent droughts in combination with degraded grazing, smallholders face high and increasing feed costs in particular during the milk production period. Depending on the quality of the rangelands and the cropping patterns, feed requirements are met by the following sources, as percent of the total: (i) rangelands: for 1-3 months, estimated as 10-15%; (ii) crop residues: for about 2-4 months, grazing on barley stubble and some vegetables residues estimated as 10-15%; and (iii) subsidized feed purchase: barley grain, straw and wheat grain at least five months of the year, estimated as 65-75%. This type of feeding is likely to result in serious protein deficiency, in case feed supplementation blocks (providing nitrogen, minerals and vitamins) are not given to the animals. Forage crops (e.g. alfalfa that is an ideal protein supplement) are only produced in irrigated areas that are in fact, very limited outside of Jordan Valley. There are 34,761 sheep and goat raising families, holding about 4.5 million animals (MoA Livestock Identification and Registry System of MoA, 2017). In the last five years, the population of small ruminants appears to have remained more or less stable rising at relatively small rates of growth.

Figure 1.1. Small ruminant population in Jordan

10. The small ruminant production systems vary from one location to another according to the availability of grazing material and forage biomass. The main production systems prevailing in the low rainfall areas are:  

(a) **Nomadic system.** This prevails in the eastern and southern regions, which are arid to semi-arid. It is the most extensive system as the herds move from one place to another by trucks, looking for grazing or water. The flock depends on natural herbage as their main source of feed, in addition to the hand feeding in winter for a period, which varies with availability of herbage. This system comprises 10% of the total production systems.

(b) **Semi-nomadic system.** Flocks depend partially on natural grazing and on crop residue and agricultural by-products. They move to land adjacent to the field crops, and return to spend the winter around the houses where they survive on the hand feeding given to them. The hand feeding period extends from 4-6 months. This system comprises 70% of the total production systems.

(c) **Settled system.** Flocks are kept in fattening units. They graze in the morning and return to their units in the afternoon. They feed on crop by-products and the adjacent natural grazing. Supplementary hand feeds are provided to them as required. This system comprises 20% of the total production systems.

11. There are four rangeland management options practiced in the low rainfall areas in Jordan, these are; traditional tribal system, cooperative management, state-managed reserves and private rangeland.

12. The contribution of the livestock sector to the national agricultural product is 55% while the contribution of sheep and goat is 33.3%. The sector employs 55,990 people as waged labor or unpaid family labour of which 75% are Jordanians (27% female) and 25% Non-Jordanians (8% female). Contribution of small ruminants to total production of fresh milk and red meat is 28% and 77%, respectively. It is estimated that the number of sheep and goats increased about by 13.8% by March 2016, due to animals brought by Syrian refugees to Jordan.

13. **Marketing.** Jordan’s marketing infrastructure for livestock, including slaughterhouses and wholesale markets, has been inadequate, according to the National Strategy for Agricultural Development 2002-2010. Since then there have been some improvements in this area, but still insufficient. The market demand for livestock and livestock products, in particular small ruminants is highly likely to continue to grow in the country considering the population increase. There is a ready market for live animals even though prices vary based on season and breed, with Awassi sheep fetching higher prices. Animals are generally sold live to livestock dealers, retailers, livestock markets and directly to customers (Table 3). The dealers sell the animals either directly to retailers for sale in local markets or for export.

<table>
<thead>
<tr>
<th>Table 3: Livestock Markets (NCARE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ratio of marketed animals (%)</strong></td>
</tr>
<tr>
<td>Sheep</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Wholesalers</td>
</tr>
<tr>
<td>Retailers</td>
</tr>
<tr>
<td>Livestock Markets</td>
</tr>
<tr>
<td>Direct to Customers</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

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55 Ibid.
57 Strategic Plan of the Agriculture in Jordan, January 2014 (EU Technical Assistance).
14. Jordan annually imports about 700,000 head of live animals of which about 75% or 500,000 are small ruminants; of these, 90% are sheep. Animals and animal products account for 39% of the total value of imported food in Jordan, which is expected to increase due to the 2.2% population growth and the improvements in standards of living. On the other hand, Jordan annually exports about 500,000 head of domestic sheep. For 2015, total sheep and goat import was 1,082,004 heads while export was 63,779. Sheep meat imports will continue to rise due to increasing domestic demand, while climatic factors and poor structure may limit production growth. Saudi Arabia and the United Arab Emirates are the main export destinations for live animal and meat export of Jordan. In 2016, Jordan exported 450,000 sheep and 70% of these were to Saudi Arabia. Almost all the exported and about 40% of imported animal use land borders.

15. Milk is processed to make yoghurt, jameed (dried cheese), ghee and labneh. Around 95% and 80.4% of the herders sell dairy products in the northern Badia and in South, respectively. Meanwhile, 12.9% is domestically consumed. The country is not self-sufficient in dairy products especially cheese, jameed and powder milk products due to lack of processing and storage equipment.

16. The potential for infection of animals with epizootic diseases is high. Poor quarantine and diagnostic laboratory infrastructure combined with limited staff, and uncontrolled mobility of livestock in the country and across borders and the import of live animals and animal by-products increases the incidence of disease. Resultantly, exports of live animals to Gulf countries have been substantially reduced. There are also informal reports of animals being imported from Syria and Israel with strains of diseases that the small-holder is not able to deal with effectively.

17. **Animal health.** Diseases are a major cost item for sheep and goat owners. Five diseases are included in MoA's compulsory vaccination program (Peste des petits ruminants (PPR), foot and mouth, sheep/goat pox, Brucellosis, Antrax and Enterotoxaemia) but with limited effectiveness. Furthermore, the percentage of vaccinated animals through the government programme is very low despite the vaccination being compulsory for livestock owners to be eligible for the government-subsidized feed (Table 2). Private sector also vaccinates small ruminants but no data is available regarding impact, scale or outreach.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Sheep</th>
<th>Goat</th>
<th>Sheep</th>
<th>Goat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No vaccinated</td>
<td>% of vaccinated</td>
<td>No vaccinated</td>
<td>% of vaccinated</td>
</tr>
<tr>
<td>Foot &amp; mouth</td>
<td>1,240,849</td>
<td>40</td>
<td>340,934</td>
<td>33</td>
</tr>
<tr>
<td>PPR</td>
<td>1,134,022</td>
<td>37</td>
<td>254,036</td>
<td>24</td>
</tr>
<tr>
<td>Sheep/goats Pox</td>
<td>956,927</td>
<td>31</td>
<td>167,336</td>
<td>18</td>
</tr>
<tr>
<td>Brucellosis</td>
<td>465,101</td>
<td>6</td>
<td>140,813</td>
<td>6</td>
</tr>
<tr>
<td>Anthrax</td>
<td>159,993</td>
<td>15</td>
<td>58,255</td>
<td>14</td>
</tr>
<tr>
<td>Enterotoxaemia</td>
<td>1,518,979</td>
<td>8</td>
<td>416,754</td>
<td>43</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,511,871</strong></td>
<td><strong>8</strong></td>
<td><strong>1,396,149</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

18. The issues in the **animal health sector** are all amplified by low management capacity and include: (i) poor infrastructure of the veterinary clinics and laboratories; (ii) weak laboratory diagnostic capacities; (iii) poor quarantine services; (iv) insufficient workforce (veterinarians and animal health technicians and capacity of the sector; (v) high turnover of the skilled veterinarians; (vi) insufficient in-service training for professionals; (vii) high prices of veterinary medicines;

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59 MOA statistics.
60 The Jordanian Times, Feb 2017.
61 MoA 2015.
19. **Access to finance.** The level of financial inclusion in Jordan is lower than in its peer upper middle-income countries. Access to loans for productive purposes is a challenge especially for rural residents. Only 2.8% of adults in Jordan borrowed for a farm or business – this is 1.5 and 2.4 times fewer than the respective share of adults in the Middle East and upper-middle income countries. Despite the poor performance in terms of financial access, Jordan has a sound and solid banking system and dynamic, high-quality microfinance sector that works to meet the needs of lower-income people in the country. However, neither of these is focused on agricultural lending, as it has been traditionally perceived as highly risky and unprofitable. Banks and Micro Finance Institutions (MFIs) have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance products. On average, the share of agriculture in the banks’ portfolio is about 3%, and in MFIs’ portfolio – about 1%, though both banks and MFIs work in rural areas. On the other hand, there are two government providers of financial services to MSMEs and agricultural businesses: (i) Agricultural Credit Corporation (ACC); and (ii) The Development and Employment Fund (DEF) that are heavily subsidized institutions focused on delivering credit to specific target groups yet with almost no mechanisms to ensure targeting and very weak loan analysis, internal controls and monitoring systems.

20. The issue of access to finance required for investment in a new microenterprise is among key challenges for low-income Jordanians and Syrian refugees living in local communities who have entrepreneurial potential but are currently unbanked due to the lack of collateral or limited opportunities to get formal start-up financing. There are many non-governmental organizations (NGOs) in Jordan working with the low-income and refugees by providing them with small grants or loans of USD 200-500 for entrepreneurial activities. However, these grants have been provided mainly for informal, home-based subsistence activities, and this market in Jordan is now near saturation. Therefore, while the activities of these NGOs may be a necessary first step to support emerging income-generating activities among the low-income and refugees, additional assistance and efforts are needed to bring these activities to a new level and transform them into businesses that will be sustainable in the long term.

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62 MoA 2011, Policy Series.
64 Information received during the project design mission.
65 Danish Refugee Council’s own program of providing small grants for income-generating activities includes 80% of home-based businesses, primarily food processing.
Appendix 1: Country and rural context background
Appendix 2: Poverty, targeting and gender

A. Poverty Characteristics

1. Jordan has one of the smallest economies in the Middle East. The population of the poor according to the 2010 results was specified as those whose per capita expenditure is less than the absolute poverty line of JD.814 per year. In 2010, 14.4 percent of the population in Jordan was living in poverty. According to the most recent official estimates, poverty rates have increased from 14.4% in 2010 to an estimated 20% in 2016. One third of the population experiences transitions into poverty during a year. Household vulnerability is embodied in the risk of transient and seasonal poverty, to which the bulk of the bottom 40 percent is exposed. Transient poverty is experienced across the income distribution, including lower-middle and a few middle income households. Overall, 33% of the population in Jordan (18.6% transient poor and 14.4% official poor) experiences poverty during at least one quarter of the year. Furthermore, although access to social sector services is high, there is considerable variability in quality due to financing and delivery mechanisms, especially in health. Poverty in Jordan is significantly higher among larger households and those with less educated heads. The link between household size and poverty sharpened between 2006 and 2010 and in all likelihood has been reinforced by direct and spill over effects of the Syrian influx.

2. Poverty is higher in rural areas and lower in urban areas but also diverse across regions. According to World Bank (2008), the poverty rate in 2006 varied from 9.4% in Amman to 23% in Mafraq. Poverty estimates at subnational level need to be interpreted with caution due to the sampling structure and the lack of statistical representativeness for some of the regions. Regional diversity may have been accentuated by the influx of Syrian refugees starting from 2011. Syrian refugees have mostly concentrated in the northern regions of Jordan, Mafraq in particular, which was already the poorest region in Jordan. About 20 per cent of Jordanians live in rural areas where poverty is more prevalent than in urban areas. Approximately 19 per cent of the rural population is classified as poor. The regional diversity related to the number of poor may not correspond to the regional diversity shown by the share of poor in the regions. The majority of poor people live in the highly populated areas. Amman, for example, which is the region with the lowest poverty rate, has also the highest share of the poor in Jordan. Poverty is not concentrated in a particular region or regions in the country. It is found in urban centres, refugee camps and rural areas. The poorest of the poor tend to be in low rainfall zones where agriculture is severely limited and where the environment is significantly degraded, leading to widespread erosion and desertification.

3. Nutrition. The World Health Organization (WHO) categorizes Jordan, as a country in early nutrition transition, whereby widespread micronutrient deficiencies and moderate levels of under-nutrition in specific populations and age groups exist along with moderate overweight and obesity. The prolonged crisis situation in Syria increases the burden on the health system and undermines food security. Chronic malnutrition among Jordanian children is relatively low. Eight percent of children are stunted or chronically malnourished (height-for-age below -2 SD), of whom one in four (2%) are severely stunted. Infant and under-5 mortality rates in the past 10 years have decreased from 12% in 2000 to 7.1% in 2010.

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%E2%80%94-study.
70 Enabling the rural poor to overcome poverty in Jordan Rural poverty:https://www.ifad.org/documents/10180/e62fd11-7f5c-
4fd5-a491-5427992d7eb7.
five years are 17 and 21 deaths per 1,000 live births, respectively. Under-5 mortality declined by 46% over the last 23 years from 39 deaths per 1,000 live births in 1990 to 21 deaths per 1,000 live births in 2012. The neonatal mortality rate is 14 deaths per 1,000 live births, which is three and a half times the post-neonatal rate. The perinatal mortality rate is 17 per 1,000 pregnancies. Ninety-three percent of Jordanian children age 12-23 months are fully immunized. Eight percent of children under five years of age are stunted, 2% are wasted, 3% are underweight and 4% are overweight. Breastfeeding is common in Jordan with 93% of children ever breastfed, and half of children breastfed for about 12 months or longer. Complementary foods are not introduced in a timely fashion for all children. Sixty-six percent of children age 6-9 months are breastfeeding and given complementary foods. Overall, only one-third of children age 6-23 months are fed appropriately based on recommended infant and young child feeding (IYCF) practices. Thirty-two percent of children age 6-59 months are anaemic, 20% are mildly anaemic, 12% are moderately anaemic, and less than 1% are severely anaemic.

4. An alarming 55% of women are overweight or obese. Thirty-four percent of women age 15-49 are anemic, 26% are mildly anemic, 7% are moderately anemic, and less than 1% are severely anemic. Almost all women (99%) received antenatal care (ANC) from medically trained personnel; the majority of women (96%) received care during pregnancy from a doctor. Seventy-eight percent of women make seven or more antenatal care visits during their entire pregnancy. Thirty-one percent of mothers with a birth in the five years preceding the survey were protected against neonatal tetanus. An overwhelming majority of births (99%) in the five years preceding the survey were delivered in a medical facility. Three in four births (76%) were delivered by a doctor. Eighty-two percent of mothers received postnatal care from a doctor, nurse, or midwife within the critical first two days after a delivery. The total fertility rate for the three years preceding the survey is 3.5 births per woman, a 38% decline from the rate recorded in 1990. Fertility decline has stalled in the past decade, with a mere 5% decline between 2002 and 2012.

5. The latest nutrition survey (April 2014) carried out among Syrian refugees in Jordan shows improvement in the acute malnutrition situation (wasting) both in Zaatari camp and outside the camp rendering it an acceptable public health situation according to WHO classification. The prevalence of stunting or chronic malnutrition in Syrian refugees in Jordan in the camp and outside the camp remains within an acceptable range as per WHO classification. Both wasting and stunting rates found in Syrian refugees in Jordan are comparable to the rates among the Jordanian population (2.4% wasting and 7.7% stunting in 2012). Nutrition/diet-related non-communicable diseases such as diabetes, hypertension and cardiovascular disease are also frequently reported among refugees visiting clinics in Zaatari. Micronutrient deficiencies remain pervasive among the Syrian refugees living both in and outside camps). Amongst children between 6 to 59 months in Zaatari 48.7% are anaemic compared to 44.7% out of the camp. Anaemia is a severe and moderate public health problem amongst non-pregnant women aged 15-49 years at 44.7% inside Zaatari camp and 31% in non-camp settings respectively. Inadequate and inappropriate practices of young child feeding among Syrian refugees in both camp and non-camp settings. 74% of households cited the WFP voucher as their main source of income, underlining the heavy reliance of the refugee households on regular food assistance and thus a great need for the continuation of assistance. It is estimated that the cessation of this food assistance will have a dramatic impact on the food security situation of Syrian refugees as some 85% of refugees in Jordan will not have economic access to sufficient food. 75% of children 6 – 23 months did not meet minimum dietary diversity requirements on the day preceding the data collection. On the other hand, dietary diversity increased significantly with

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74 This section is based on Department of Statistics (2012), Jordan Demographic and Health Survey 2012.
the child’s age. More children aged 18–23 months (38%) had an adequate dietary diversity than infants aged 6–11 months (12%). The study indicated a relatively higher consumption of dairy products (77%), followed by eggs (49%) and grains (36%), as well as low consumption of Vitamin A-rich fruits and vegetables (26%), and other fruits and vegetables (20%). Meat and pulses were the least consumed food groups (12% and 10% respectively).76 The Nutrition Working Group: of Donors has prepared the Nutrition Response Interventions for Syrian Refugees and Vulnerable Host Community in Jordan 2014 – 2015 which outlines actions to be taken to address the nutrition needs of Syrian refugees and the agencies that will be responsible for interventions in the different governorates.

6. Women economic participation. Women constitute about 48.5 % of the total population.77 As for illiteracy rate, in 2012, adult female illiteracy rate was 10%, whereas it was only 3.5% for adult male in 2016.78 Jordan ranks 138th among 144 countries in terms of women’s economic participation and opportunity.79 Women face particular obstacles and disincentives to economic participation. Within the Middle East region, Jordan’s female labour force participation rates lies in the bottom half, below the regional average of 25%. In 2014, the female labour force participation rate in Jordan was about a fifth of that of males (12.6% versus 59.7%). 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. Just 16 percent of women have a financial institution account. The figures for savings are particularly striking as they reveal how inadequate access to finance and the socio-political bargain interact with each other. It is estimated that 78% of unemployed females are educated and hold an intermediate college or higher diploma.80 Employer preferences based on gender stereotypes and the heavy burden that labour legislation places on businesses to protect female employees, as well as social constraints on what kind of work is acceptable for women, have repercussions in the hiring process. Taboos are focused on women in the workplace (particularly in construction, outdoor sales, transport services, manufacturing and machinery, and hospitality), the type of work (agricultural tasks and manual labour), and the work conditions (late shifts).81 Even though the Labour law does not discriminate between women and men with respect to pay, the average female monthly salary, in both the public and private sectors, was on the average 10% less than men. It is worth noting that for decision making professions; this discrepancy was much higher, for example female legislators, senior officials and managers are paid about 32% less than men (Department of Statistics of Jordan (DOS), 2013).

7. The highest gender gap is evident in the agricultural sector where the percentage of agricultural holdings headed by women amounted to only 3% in Jordan in 2010. Only 44% of households headed by women own agricultural land and 30 per cent own livestock. Instead, 68% of households headed by men own land and 36% of them own livestock.82 Women make up 65% of the farm labourers in Jordan.83

8. Inequality based on gender is widely documented. One major cause of this stems from 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 (World Bank Jordan Country Gender Assessment, 2013). A second reason is related to the very low levels of female participation in

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77 The Legal Framework and Women Status in the Hashemite Kingdom of Jordan Saleh Al-Sharari1 & Suheir AlKhatefile http://www.ccsenet.org/
78 (Ministry of Health website, 2014).
82 https://www.ifad.org/documents/10180/e62f2d11-7f5c-4fd5-a491-5427992d7eb7.
the labour 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.

9. **Safety Net.** Jordan has built a developed system of social protection comprising consumption and tax subsidies, targeted cash transfers, social insurance and social care. Its social protection system serves certain segments of society including the poor, orphans, elderly, abused women and children among other vulnerable groups and individuals. However, it has no comprehensive social protection policy. Government has several social assistance programs: social protection services by Ministry of Social Development (MoSD), National Aid Fund (NAF), National Zakat fund in addition to Social assistance by NGOs including National NGOs, World Bank, UN agencies, IFAD, USAID and ILO. NAF is the core of Jordan’s social protection system providing cash transfers to almost 100,000 households (8% of the Jordanian population) and to 271,000 individuals (UNDP 2013). About 70% of the NAF beneficiaries are elderly or suffer from a disability. Social security is obligatory to all working entities in the country, it provides unemployment insurance and health insurance.

10. Over the past decade, mounting economic and social challenges facing the country – including high poverty rates, high unemployment rates, budget deficit, and most recently, the influx of Syrian refugees – have put the social security system under additional pressures. Jordan's Poverty Reduction Strategy concludes that the system of social support has failed to prevent an increase in abject poverty. Furthermore, the economic crisis and fiscal deficit have put severe pressures on the availability of funds needed to provide consumer subsidies and cash transfers necessitating reforms aimed at reducing subsidies and improving targeting of cash transfers to the poor. It recommends policy measures for better targeting of cash transfers (i.e. reducing inclusion and exclusion errors), effective social insurance and social care services providing an inclusive social protection system for the poor and below middle class households.

11. **Syrian Refugees.** There are now 1.26 million Syrian refugees in Jordan with around 657,000 registered with UNHCR. Northern and Eastern Jordan have the highest proportion of highly and severely vulnerable refugees. The largest numbers of Syrian refugees are located in the northern governorates of the country. Amman, Irbid and Mafrak governorates alone are hosting more than 76% of all the Syrian refugees in Jordan. Syrian refugees constitute 52% of the total population of Mafrak, already the poorest region in Jordan, with nearly half living in communities outside the refugee camps. Syrian refugees constitute 12% of the total population of Irbid, and 7% of the total population of the Amman governorate. The average size of the household is 6. Severely vulnerable refugee families have more family members, more children and a higher dependency ratio. Eighty one percent of Syrians are under the age of 35, with 65% of all registered Syrian refugees in Jordan are under the age of 25.

12. Ninety-three percent of Syrians living outside of camps are living below the poverty line in Jordan. Nearly 79% of refugees are highly or severely vulnerable to food insecurity, and 72% are severely vulnerable due to the adoption of emergency coping strategies to meet food needs. Over 80% of Syrian refugees are using crisis or emergency coping strategies. Refugees have exhausted their savings and they are depleting their food intake, sending family members (including children) out to beg or work (Syrian children, earn JD 2-5 per day) resorting to high risk, illegal or socially degrading jobs. Over 60% of Syrian non-camp families have a high or severely vulnerable level of debt per capita, influencing their ability to cope economically even if

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85 Meeting of IFAD Mission with NAF in 2016.
91 UNHCR (2015). VAF: Key Findings.
receiving income/assistance. 56% of families with 'low' vulnerability have work permits and only 17% of severely vulnerable families have a work permit. Over 80% of Syrian refugees have primary education or below. Forty-one percent of Syrian individuals are part of families with severe health vulnerability and 15% are part of highly health vulnerable families. Over 92.5% of refugees are living in rented accommodations in urban areas. The majority of dwellings are considered ‘poor quality’. For the majority of families who have insecure livelihoods or income, maintaining rental commitments is a considerable burden. Over 75% of individuals are highly or severely shelter vulnerable and 50% are highly shelter vulnerable. 93

13. Around 120,000-160,000 Syrian refugees working are estimated to be working informally in the country. ‘Open’ sectors Syrians are allowed to work in with work permits include manufacturing, construction, agriculture, while ‘closed’ sectors include some sales, education, hairdressing, and most professional sectors such as engineering and medicine as well as any kind of selling in markets. Work permits issued so far number 34,467 of which only 2.0% (558) have gone to Syrian women. In the informal labour market, only 7% of Syrian women access work, compared to 51% of Syrian refugee men. Women reported the main obstacles to work being family-related (child care, family objection, household responsibilities) and structural (lack of opportunities, lack of access). Minors under age 18 form a group of informal Syrian workers who are not eligible for work permits, a population of approximately 11,098 workers. 94

14. Exclusion. Despite having strong legal protections against marginalization and exclusion based on ethnicity, religion, and disability, Arab refugees in Jordan face significant obstacles to economic participation. Widespread prejudice handicaps the social advancement of the kingdom’s several hundred thousand Iraqi refugees, despite national efforts to extend the provision of public goods like education and healthcare. Professional employment remains elusive for many Iraqis. Although the Government and the people have been welcoming of Syrian refugees, building refugee camps and offering basic services, few Jordanians are ready for large-scale integration of Syrians into their population on a permanent basis. 95 Facing poor economic prospects and inadequate income, youth are unable to marry, afford to live independently, or support a family. Furthermore, inability to fully participate in adult life is a form of social exclusion that is also economic in that, for example, someone who is not employed cannot get credit. 96

B. Target Groups

15. The primary target group of SIGHT will be women and men who are smallholder livestock farmers of small ruminants and for whom livestock is a source of income, food security and a safety net. In Jordan, there are 34,761 smallholder families dependent mainly on sheep and goat raising (MoA, 2017). In addition, there are 1500 Jordanian and 11,270 non-Jordanian permanent labour working in this sector (DoS, 2014). About 95% of sheep and goats are raised under the semi-intensive system with farmers feeding their sheep and goats at home and utilizing range and field crop residue whenever it is available and achievable. This system common in villages, depends mainly on family work, consists of medium and small-holdings, and flocks are mostly stationary. Within this group, the project will be engaging with both the vulnerable small ruminant farmers operating at a subsistence level and those with higher productive potential. Women play a critical role in livestock rearing, especially for flocks under 50. However, their contribution is not fully acknowledged in the statistics that predominantly show men to be small ruminant farmers. Women and youth both from among

93 UNHCR (2015). VAF: Key Findings.
96 Youth in Jordan, Transitions from Education to Employment,Ryan Andrew Brown, Louay Constant, Peter Glick, Audra K. Grant.
Syrian refugees, a highly vulnerable population, and Jordanian host communities will be an important target group.

16. **Poor small-holder men and women semi-intensive small ruminant farmers.** The project will be targeting both the vulnerable farmers with 50 or less sheep operating at subsistence level with marginal surplus and those with higher productive potential with up to 200 sheep and goats who are primarily dependent on income from livestock. The size of the household can range from 5 to 12 members. Education levels vary but most farmers under 50 can read and write. These farmers may be landless, owning only their house and a small area around it or own or rent a few dunums. These farmer’s flocks are mostly stationery. They may utilize rangeland where possible, rent land for grazing and buy feed for their animals and access the barley and wheat bran provided by the government at subsidized rates. Women are active in small ruminant farming and primarily responsible for animal management. Anecdotal evidence suggests that women’s involvement is highest when flocks are small (under 50 heads). The management of larger flocks involves non-Jordanian labour. There is a gender division of labour with women’s tasks including feeding, watering animals, cleaning sheds, milking and processing dairy by-products such as yoghurt, jameed (dried fermented milk), ghee and labneh. The production of yogurt is common but other by-products are more commonly produced in the Badia. Men graze the animals, access veterinary care, buy feed and sell and buy animals and dairy by-products. However, in reality, these roles are not so strictly defined and there are variations by regions and households.

17. The sale of animals is the most important income source for the smallholders. There is a ready market for live animals even though prices vary based on season and breed, with Awassi sheep fetching higher prices. Animals are generally sold live to livestock dealers, retailers, livestock markets and directly to customers. In the Badia, milk is sold to cheese makers; but in the southern Badia, families make Jameed (dried yogurt) and clarified butter for sale. Around 95% of the herders sell dairy products in the northern Badia and this decreases to 80.4% in the south. However, although there is a strong demand for dairy products especially cheese and jameed, farmers are not always able to process their milk due to lack of processing and storage equipment.

18. During the annual grazing period (March to October) herders traditionally migrate setting up temporary settlements to graze their herds at higher altitudes. Local herders are sedentary, returning to their villages each night after grazing. Following the end of this grazing period, both Bedouin and local herders winter their animals in lower altitudes providing feed bought from input suppliers. semi-extensive producers usually seek treatment for their animals in winter. The prime milking season for is from March to August, and sheep from March to late June. The Awassi sheep produces average of 0.8 kg/day of milk, the Shami goat produces average of 2 kg/day of milk. Milk is generally sold to shops, or neighbours or cheese makers. Animals are sold through middlemen or directly where there is access to markets. Access to markets varies depending on the location of herders.

19. The major challenges faced by these men and women farmers include (i) high cost of feed, exacerbated by the deterioration of the rangeland (as a result of over grazing, low rain fall and unregulated use), (ii) scarcity of water, (iii) low productivity of animals, (iv) high neonatal mortality rates, (v) poor access to improved breeds, animal health advisory services and high cost of medicines, (vi) access to finance as well as currently, and (vii) low profitability due to low sale prices for animals. Women face some additional constraints. These include their double burden of work, cultural norms that can limit mobility and low visibility as farmers, resulting in their exclusion from training programmes and the minimal extension services. There are regional variations in the intensity of these constraints. Some of these constraints are exacerbated in the Badia due to remoteness: for example, due to weather conditions and price,

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97 One donum equals .1 hectare.
60% of sheep are not milked in the Badia in certain seasons due to marketing constraints. Under SIGHT, these men and women farmers will benefit from training and extension services which will enable them to increase productivity of livestock with better feeding practices and management of livestock, improve milk quality and profitability of livestock. They will also benefit from the improved breeding programme funded by IFAD. The project will benefit women home-based producers by training them to produce a more hygienic, higher quality product to improve marketability.

20. **Syrian Refugees (men and women)** The project will target poor and very poor Syrian refugee households with a special focus on women and youth. Most Syrian households live under the poverty line. The Vulnerability assessment framework (VAF) baseline survey in 2015, assesses (not self-reported) an average of JD 56.48 per capita per month and JD 282.4 per month per household, which is below the national poverty line. The main source of income comes from cropping, livestock and remittances. The number of male workers in a household plays a key role in determining the income level. The average debt of these households is JD 727. The average size of the household is 5 members. Sixty-one percent of households do not have work permits. Obtaining a work permit, although it is officially free, can involve payments of JD 500 are reported. Most households are employed as labour in the agricultural sector with less than 1 per cent practicing sharecropping. The majority work on olive and fruit orchards (74.2%) with some working in vegetable farming and livestock production. During field visits, it was clear that many among the Syrian refugees have skills that will enable them to engage in a range of income generating activities. These skills include carpentry, tailoring, plumbing, hairdressing, baking traditional sweets, curtain-making, soap-making, processing of dairy products, agro-food processing, agriculture and livestock rearing, etc. In these and other small businesses, work permits and licenses, lack of capital for operating costs and investment in basic equipment remain key constraints. Land can only be accessed in partnership with Jordanians. In earning livelihoods from agriculture, not being able to legally own land or physical assets such as cars, motorbikes is a key constraint which prevents Syrians from investing in livestock and other assets.

21. Women are engaged in some home-based businesses but can only sell their produce to neighbours as they are not allowed to sell in the markets. The most vulnerable among the Syrian refugees are women-headed households, widow headed households, households with more female than male members, and orphans. Some vulnerable families are forced to withdraw their children from school and send them to work long hours for JD 4 to 5 per day. SIGHT will help the Syrian refugees by providing them with grants for working capital and equipment for income-generating activities accompanied by business development services and skill-based training if needed. It will explore the possibility of funding mixed groups of Syrian and Jordanian women to run small businesses jointly as a strategy for promoting social cohesion and overcoming the barrier to marketing. In accordance with the sustainable poverty graduation approach, the project will provide especially vulnerable households with grants for graduation into sustainable livelihoods.

22. **Vulnerable Jordanian Rural Women and Men.** SIGHT will target vulnerable Jordanian women and men from poor rural households, including households of small ruminant farmers living below the poverty line. Opportunities for both women and men in rural areas are limited but particularly so for women who face cultural restrictions also. Women's income generating activities include processing of dairy products, tailoring, agro-food processing, small shops, embroidery, livestock rearing and vegetable and fruit farming. Some women are members of

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58 This section is based on the findings of Boundia Alexandre Thiombiano, Quang Bao Le, Enrico Bonaiuti, Denis Ouedraogo, Laura Buffoni, Najwan Aldorghan, Rania Bakeer, Elias Ghabdan. Agricultural and Syrian refugees in Jordan: current situation and opportunities ahead – Final report. UNHCR. Amman, Jordan. 83pp. Targeting / Baseline Study of Refugees Agricultural Livelihoods in Jordan conducted by ICARDA for UNHCR in Madaba, Irbid, Mafraq and Amman – outskirts and consultations with Syrian refugees in Madaba and Irbid.

59 National poverty line in Jordan + 2.23JD/person/day (The united Nations Economic Commission for Europe.
CBOs and cooperatives and undertake income-generating activities such as agro-food processing as a group. Men are typically engaged in agricultural activities, casual labour, some are mechanics, plumbers or electricians and some may be working for small businesses. These men and women’s constraints include lack of capital, inadequate levels of skills, poor access to finance as well as lack of marketing expertise and linkages and for women specifically, limited population. These men and women will be supported with customized grants for graduation into sustainable livelihoods.

23. **Youth.** Youth will be an important target group for SIGHT as more than seventy-percent of Jordan’s population is under 30 years of age. In rural areas, the challenges youth face are exacerbated as employment opportunities tend to be even more limited. They are seventy percent of the country’s population but face high rates of unemployment. Opportunities for employment are even more limited in rural areas. The new generation is moving away from agriculture and there is a strong preference among young men and women for employment in the public sector. Young women in rural areas face even higher rates of unemployment and more limited opportunities due to cultural restrictions especially on mobility. Young Jordanian men do engage in agriculture to some extent, they are also involved in mobile repair shops, car mechanics, shopkeepers etc. Young Jordanian women may be involved in selling fruits and vegetables or home-based businesses. Eighty-one percent of Syrians are under the age of 35, with 65% of all registered Syrian refugees under the age of 25. Youth experience high rates of unemployment. Syrian youth’s barriers are further intensified due to restrictions of sectors they can work in and they are likely to get the lowest paid jobs as waiter, agricultural labour, cleaners etc. with young women likely to stay home and at best engage in some home-based businesses. The constraints youth face, to varying degrees depending on their nationality and gender, include lack of capital, limited availability of jobs, mismatch between skills and jobs available and lack of experience in running a business. These young men and women will be supported with customized grants for graduation into sustainable livelihoods.

**D. Targeting and Gender Strategy**

24. **Project target group.** The project will target 11,920 households and a total of 57,216 beneficiaries. It will directly target 7,720 small ruminant (sheep and goat) farmer households with herds of up to 200 animals interested in improving the productivity of their herds in a sustainable manner. These small ruminant farmers will primarily be from Jordanian communities hosting Syrian refugees and will constitute nearly a third of the approximately 34,761 households involved in small ruminant farming in Jordan. They will be provided with free of cost training and advisory services to improve the productivity of their herds. Some households will benefit from support for water harvesting and temporary enclosures for regeneration of grasslands with some women benefiting from gathering medicinal plants, and some small farmer households from demo plots established to promote good practices of fodder production. In addition, the project will also target 3,650 vulnerable women, men and youth from Jordanian host community households and Syrian Refugee households with graduation packages for sustainable livelihoods from on-farm and off-farm rural enterprises. The extreme poor will be targeted with 1,000 of these graduation packages while 2,650 packages will be for poor households. The total Syrian Refugees benefitting from the

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100 The project will include farmers with up to 200 animals as stakeholder consultations show that in Jordan this size of herd is considered a commercially viable enterprise potentially interested in breed improvement. At the same time, this size of flock remains vulnerable to fluctuations due to cost of production and price of animals. Farmers have to reduce the size of their flocks when cost of production becomes too high. It also needs to be noted that whereas size of flock is not necessarily a determinant of economic status, the size of herd of 100 to 200 is considered to be an indicator of a serious engagement with small ruminant farming. The inclusion of these farmers will also be necessary for the project to meet its objective of improved productivity in the small ruminant sector as they will be more likely to invest in breed improvement and increased productivity due to their market orientation. This will not lead to elite capture as only those farmers among them who due to their socio-economic status have challenges in paying for private veterinary and extension services will be likely to self-select for the extension services provided by SIGHT.
25. **Poverty targeting approach.** SIGHT will have a strong poverty, vulnerability and gender focus. The project will focus on the poor smallholder small ruminant farmers, the Jordanian host communities most affected by the influx of Syrian refugees and the highly vulnerable Syrian refugees. The presence of smallholder ruminant farmers and Syrian refugees will be criteria for selection of governorates and villages within the governorates. The project will further sharpen its poverty focus by conducting a targeting exercise in these areas using poverty criteria to identify beneficiaries for sustainable livelihoods in an objective and transparent manner. The project will benefit small ruminant holders nationwide through support for policy engagement and technical and institutional strengthening of Ministry of Agriculture to support small ruminant farmers. In its policy engagement, the project will focus on incorporating the perspective of poor smallholder women and men farmers and ensure that their interests are promoted. Women and youth will be prioritized for the graduation out of poverty grants. The project will be implemented in a manner that will be sensitive to their constraints and will encourage their participation.

26. **Geographical targeting.** SIGHT will be implemented in the six Governorates of Mafraq, Irbid, Jerash, Ajloun, Madaba and the outskirts of Amman. The selection of these governorates is based on the following criteria: (i) the size of the small ruminant population, (ii) number of households involved in livestock farming, (iii) poverty rate, and (iv) the registered Syrian refugee population. Within the governorates, the following criteria will be used to select areas of intervention: (i) secondary data from national, regional or local sources on areas of high poverty, (ii) high dependency of the rural poor on livestock for livelihoods; (iii) communities hosting Syrian Refugees, (iv) interest of potential beneficiaries in project activities, and (v) synergies with other donor or government initiatives. Project activities will be clustered geographically as far as possible to promote efficiency in delivering services, synergies and impact.

27. **Self-selection.** The project interventions for livestock farmers such as provision of training and extension services will principally be attractive for small-holder ruminant farmers who face challenges with feeding their animals, limited knowledge of animal management practices and resource constraints. The micro and small loans are likely to be attractive to smallholder farmers and micro-entrepreneurs with the need to borrow and service the loans from the investment.

28. **Direct targeting.** The project will have a sharp poverty and vulnerability focus in targeting the graduation packages. Around 30% of the graduation packages will be targeted to the extremely poor and 70% to the moderately vulnerable poor. In a selected community, a wealth ranking exercise will be undertaken to identify poor and extreme poor households. A scoring system based on the following criteria will be used to further screen, identify and prioritize beneficiaries who are poor (i) women-headed households, (ii) low education level of head of household, (iii) households composed predominantly of women/girls, (iv) households with children out of school, (v) households with under 6 months of employment, (vi) member suffering from disability, and (vii) receiving cash assistance. Additional indicators used to identify the extreme poor will be: (i) living in rented house/temporary shelter, (ii) do not own assets such as land, house, motorbike or car, and (iii) do not receive cash assistance. Additional supporting criteria from a community wealth ranking could be added to refine these

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These will include women who are widowed, divorced or never-married. Households with men not able to earn due to ill health or disability will also be included.
criteria. In addition to the poverty criteria, two other criteria that will be important for selecting graduation participants will be (i) women/youth/men willingness and ability to undertake productive work – enterprise or employment; and (ii) existing skills. A targeting instrument based on these criteria will be tested and piloted by implementing NGOs.

29. The graduation packages for the poor and the extreme poor will target 50 per cent women and 50% men. Out of the fifty percent men, 25% will be youth (18 – 30 years).102 Young women will be prioritized, however, a quota has not been fixed as gender norms and life cycle needs of young women tilt the balance in favour of older women participating more actively in income generating activities. The graduation package for the poor will target 50% Jordanians and 50% Syrians. In the supported targeted to extreme poor, Syrian refugees will receive seventy percent of the support and Jordanian host community households will receive 30%. In the training and extension services provided to small ruminant farmers 40% will be to women farmers and 15% will be youth. Thirty percent of loan recipients for on-farm or off-farm rural enterprises will be women. In stakeholder platforms for inclusive policy dialogue, SIGHT will ensure that 25% of the participants will be small holder women and men farmers drawn from smallholder ruminant farmers benefiting from training and extension services with a minimum of 30% participation of women in this forum. The table below reflects these percentages in the number of beneficiaries for each component.

Table 2.1: Beneficiaries of SIGHT

<table>
<thead>
<tr>
<th>Component</th>
<th>Total Households</th>
<th>Syrian Refugee (WHs)</th>
<th>Total Beneficiaries</th>
<th>Syrian Refugees (Individuals)</th>
<th>Women</th>
<th>Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investment in Farmer Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1.1 Enhancing public sector services</td>
<td></td>
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</tr>
<tr>
<td>1.2 Improving community and private sector services</td>
<td>7,720</td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
<td></td>
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<tr>
<td>1.3 Support to policy engagement</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td><strong>Total Component 1</strong></td>
<td>7,720</td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
<td></td>
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<tr>
<td>2. Business Development and Access to Financial Services</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2.1 Grants for graduation into sustainable livelihoods</td>
<td>3,650</td>
<td>2,025</td>
<td>17,520</td>
<td>10,125</td>
<td>1,825</td>
<td>913</td>
</tr>
<tr>
<td>Poor</td>
<td>2,650</td>
<td>1,325</td>
<td>12,720</td>
<td>6,625</td>
<td>1,325</td>
<td>331</td>
</tr>
<tr>
<td>Extreme Poor</td>
<td>1,000</td>
<td>700</td>
<td>4,800</td>
<td>3,500</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>2.2 Lending facility for rural businesses</td>
<td>550</td>
<td>2,640</td>
<td></td>
<td></td>
<td></td>
<td>165</td>
</tr>
<tr>
<td><strong>Total Component 2</strong></td>
<td>4,200</td>
<td>2,025</td>
<td>20,160</td>
<td>10,125</td>
<td>1,990</td>
<td>913</td>
</tr>
<tr>
<td><strong>Total Project beneficiaries</strong></td>
<td>11,920</td>
<td>2,025</td>
<td>57,216</td>
<td>10,125</td>
<td>5,078</td>
<td>1,888</td>
</tr>
</tbody>
</table>

30. **Empowering and Capacity building.** The participation of men and women small-holder farmers of livestock in training for small ruminant management as well as representation in stakeholder forums will increase the capacities, confidence and the visibility of small holder women and men as livestock farmers. Women, men and youth from vulnerable households supported by graduation packages will be empowered through skill development, nutrition awareness training, entrepreneurship development, employment and engagement in livelihood activities.

31. **Enabling measures for poverty targeting and mainstreaming gender.** The project will sensitize the MOA, policy makers and implementers to challenges and opportunities of smallholder small ruminant farmers through the inclusion of women and men farmers and small

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102 The national youth strategy 2005-2009 of Jordan defines youth as between 12-30 years.
processors as participants of the stakeholder forums. The forums will be organized in a way that will ensure that project beneficiaries will have space to voice their views and opinions. SIGHT will sensitize financial institutions to the smallholder farmers and rural women and men entrepreneurs as viable clients. NGOs will be sensitized to the needs of the extreme poor through capacity building and experience in implementing the graduation packages.

32. The gender strategy of the project will be based on lessons from projects effective in the inclusion of women and the experience of projects in the livestock sector regarding interventions that can increase women’s productivity and incomes, enhance their decision-making and control over productive assets and lead to their empowerment. Successful participation of women from poor rural households entails an approach that does not add to their transaction costs and yields real benefits for them. It also requires gender sensitivity to existing household division of work with respect to the management of livestock and dairy production.

33. The empowerment of women will be ensured through a range of strategies: (i) targets will be set for women’s participation in all key activities with women and women-headed households receiving priority; (ii) a gender and targeting action plan will be formulated at the implementation stage by the PMU and partners and reviewed after two years; (iii) the terms of reference for staff and technical experts will include responsibilities for following the gender strategy of the project; (iv) the project will be sensitive to arrangements required to enable women to participate – such as organizing women only training events for training in animal health and management, arranging training at village or municipality level to accommodate women’s time constraints or providing transport allowance and the inclusion of a woman Community Development Officer in the Farmer Support teams to promote communication with women; (v) inclusion of women’s empowerment training as part of the graduation package to that empowers women in challenging circumstances to envision and create new possibilities for their lives including reflection on career, financial interests, relationships as well as reducing workload through strategizing on how to mobilize other people in the family to help them in house work; (vi) the monitoring and evaluation framework will include indicators disaggregated by sex to track the project’s performance in promoting women’s empowerment in terms of their capacity-building and benefits; (vii) the PMU will be encouraged to maintain a gender balance in staffing, with women comprising at least 30% of the staff; (viii) a Gender and Livelihood Officer will be hired for the PMU; (ix) organizations recruited for assisting in implementation of project activities will be required to have a demonstrated ability to work with women; (x) women will be included in the policy stakeholder forums or any other stakeholder forum organized by the project, the project will ensure the inclusion of women as livestock farmers both as participants and speakers with the forum structured to ensure that they have space to voice their views and opinions; (xi) any studies undertaken by the project will address gender issues and disaggregate data collection, analysis and findings by gender; (xii) a gender assessment of project activities will be conducted prior to the mid-term review; and (xiii) a poverty and gender specialist will be included in the yearly supervision missions, Mid-Term Review and Project Completion Mission.
Appendix 3: Country Performance and Lessons Learned

Country Performance

1. IFAD-supported operations in Jordan since 1981 include both loans for projects, grants and non-lending activities, including knowledge management, policy dialogue and partnership building – which are often financed through grants. The Fund has financed important initiatives consistent with the Government’s strategy for agriculture and rural development. The largest part of the operations consists of eight loan-funded development projects with a total value of USD 204.5 million. IFAD is currently financing a portfolio of three projects in Jordan with a total value of USD 14.34 million of loans and grants with a co-financing of around USD 10.4 million, addressing agricultural resources management, rural economic growth and employment, irrigation technology and biodiversity. IFAD has also been managing the implementation of projects financed by GEF grants to pilot some innovative approaches related to water use efficiency and sustainable land management. A grant in December 2015 was utilized by the Jordan River Foundation to enhance food security for communities in and around the Zaatari refugee camp. Jordan is also benefiting from a number of IFAD-supported regional grants.

2. The IFAD Independent Office of Evaluation (IOE) undertook the first Country Programme Evaluation for Jordan in 2012. It noted that IFAD is a long-standing partner of Jordan (30 years) in agriculture and rural development in rain-fed and semi-arid areas and has financed important initiatives consistent with Government’s strategy. The main results and lessons learned are given as follows:

- **Soil and water conservation.** These interventions were generally effective, notwithstanding start-up and implementation delays. However, these activities have been inherently unsuitable for reaching the poor in Jordan as IFAD target groups are either landless or own only small plots.

- **Rural finance.** The beneficiaries of the rural finance activities (mostly women) have increased their income through home-based enterprises, mostly in food processing. However credit did not reach large numbers of the intended poor beneficiaries. ACC’s collateral requirements – land and a payment guarantee from someone with a salary or pension – essentially precluded the poor and landless from benefiting from credit. IFAD made periodic attempts to persuade the ACC to modify its approach, but only a few marginal changes were achieved.

- **Community empowerment.** This is a mainstay of IFAD strategy for rural poverty alleviation in Jordan. Empowerment of communities has been affected by a number of challenges, such as lack of commitment of the MoA, absentee farmers, and weak project management unit capacity.

- **Policy and institutional strengthening.** Impact on policy and institutional development was limited. The COSOP proposed a very broad agenda for policy dialogue, which proved unfeasible. While IFAD was successful in mobilizing grant resources by and large they have not been linked to the COSOP’s policy dialogue objectives, and thus did not contribute materially to progress in these areas.

- **Achievement of COSOP Objectives.** The country programme has faced challenges due to the difficult local context. IOE found the implementation of the two COSOPs suffered from being too broad and therefore the overall impact of the country programme was limited.

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103 The loan facility offered by IFAD was not utilized by the country from 2009 until the country started to borrow again in 2015.
Key Lessons

3. Key lessons learned including those included in the Country Strategy Note (Oct 2016) are the following: (i) projects have to be tailored to the realities of the context in which the poor operate for them to be relevant; (ii) proposed project activities must represent real value for the targeted communities to elicit their interest and participation; (iii) developing a proper targeting strategy to guide project design and implementation is key to ensure inclusiveness, reach out to IFAD target beneficiaries and avoid elite capture; (iv) organizing women’s groups to undertake activities collectively provides an added measure of support to them given their disadvantaged socio-economic conditions; (v) provision of financial services through an established development finance or MFI requires that the project follow the loan procedures, policies and risk mitigation strategies of the financial institution; (vi) Jordanian Banks and MFIs with their excellent performance and strong social focus are well positioned to serve IFAD’s clients since projects implemented by the government financial service providers have not led to higher financial inclusion of project beneficiaries or to scaling up results; (vii) the slow rate of adoption of technology in the agricultural sector partly stem from public extension service operating with conventional approach and limited effectiveness, this calls for considering new approaches to service delivery; (viii) establishing effective partnerships between Government, international organizations, civil society and private sector can improve results significantly and ensure better project impact; and (ix) the necessity of using a participatory approach cognizant of the traditional tribal social system of the Bedouin tribes, where traditional norms on land and water management are still respected.

Project adherence to IFAD policies

4. As clearly indicated in Appendix 12, SIGHT is fully aligned with IFAD’s Strategic Framework 2016-2025, and NEN’s 2016 Country Strategic Note for Jordan. The project activities, implementation arrangements and M&E system is designed in compliance with the following IFAD policies and strategies: (i) Targeting; (ii) Gender Equality and Women’s Empowerment; (iii) Rural Finance; and (iv) Private-Sector Development and Partnership Strategy. Fieldwork for the preparation of SECAP report confirmed the classification of Environmental and Social Category as B, and Climate Risk Classification as “Moderate” provided it fully integrates the Climate Change adaptation recommendations for the agriculture sector, proposed by the Government in the Third National Communication (TNC) to the UNFCCC. SIGHT is fully aligned to FARMS policy, as indicated below.

Project adherence to FARMS Policy

5. The project and FARMS are aligned in terms of geographical coverage, overall goals, development objectives, outcomes and financing plan. More than 76% of Syrian refugees are located in the three out of six project governorates and constitute 52%, 12% and 7% of total population in Maafraq (poorest governorate in Jordan) Irbid and Amman governorates, respectively. SIGHT will help 3,650 vulnerable women and youth from among the Jordanian host communities and Syrian refugees with grant-based income generating packages for on-farm and off-farm activities. This is fully aligned with FARMS overall goal of ensuring that poor rural people in host areas overcome poverty through remunerative, sustainable and resilient livelihoods for both displaced people and host communities.
Appendix 4: Detailed Project description

Component 1: Investments in Farmer Services

1. The expected outcome of the component is improving the productivity of small ruminant farming, through strengthening the government’s breeding programme, through provision of improved breeds, enhanced veterinary services, extension on health and animal nutrition to smallholders and improving of policy and regulatory environment for small ruminant production and rangelands in the country. The component consists of three strongly interlinked subcomponents:

   1.1. Enhancing Public Services;
   1.2. Improving Community and Private Sector Services; and
   1.3. Support to Policy Engagement.

2. Sub-component 1.1. Enhancing Public Services. The objective of this subcomponent is to increase the productivity and competitiveness of the small ruminant flocks in the country by strengthening the national breeding programme led by the MoA and NCARE and complementary public support systems needed in health services, strengthening the system of quarantine and traceability through selected investments in infrastructure and capacity building. The subcomponent includes the following specific activities: (a) Establishing the Open Nucleus Breeding Programme (ONBP) breeding programmes for sheep and goats; (b) Strengthening sheep and goat breeding stations; (c) Refurbishing the Training center at Khanasrah Station; (d) Improving diagnostic animal health laboratories and Artificial Insemination capacity; (e) Rehabilitation of MOA quarantine and animal health certification facility in Mafraq; (f) Geographical Indication (GI) for the Jordanian Awassi Sheep; (g) Improving animal traceability; and (h) TA, training and capacity building.

A. Establishing the ONBP breeding programs for sheep and goats:

3. SIGHT will support the MoA and NCARE in enhancing and implementing of its small ruminant breeding programme, which follows the FAO Open Nucleus Breeding Program (ONBP) methodology. Activities that will be promoted within SIGHT and during the 6 years of its implementation in the 6 targeted Governorates will continue and expand nationally by MoA and NCARE during and after the completion of the project.

4. While the ONBP described below is only for Awassi sheep, the same system will be followed for breeding Shami goats. The breeding plan is based on the production of improved certified animals at 2 levels:

   • Elite breeding programme.: The underlying principal of the ONBP is the breeding of pure lines of animals with reliance on basic selection methods. The purity of the Awassi (or Shami) breed will be determined by phenotypic and genotypic analyses. Transfer of genetic materials via rams or artificial insemination (AI) from the elite breeding partners (semi-elite flocks) to the elite flocks (stations flocks) are limited to the selected superior animals that produce meat or milk above the average of the elite flocks. The data collected by staff in breeding stations will be analysed by the consulting expert breeder and the station managers for genetic evaluation and selection of the parents for the next generation. Genetic materials will flow between flocks under the control of breeders.

   Two lines of improved Awassi, namely for meat and for milk, will be produced at Khanasrah station. The participants in the ONBP such as the elite herders, cooperatives or other commercially-oriented producers (Breeding Partners) will have the choice of producing either.
• **Elite breeds** are produced at the stations (Khanasrah for sheep and Al-Wallah for goats) under highly controlled conditions of breeding, animal health and nutrition. Semen from improved purebred is collected and stored for further sales and delivery for use by herders to improve their flocks through the Artificial insemination (AI) processes. Since the Elite breeds will be subjected to genotypic and phenotypic analysis and high quality control, the breeding stations will not be able to produce a large number of these Elite breeds and the larger level of multiplication of the improved breeds will be undertaken at the second semi-elite level.

• **Semi-Elite breeds.** are produced by Breeding Partners (BP) within the breeding programme. These BP are elite and highly knowledgeable lead farmers/herders or cooperatives. Several BP will be selected based on a well-defined selection criteria (see the section below on characteristics of the breeder partners) and contracted to participate in the ONBP; it will be preferable to select 3 BPs: one for Mafraq, one for Irbid, Jerash and Ajlun and one for Madaba and the Amman outskirts. Since not many herders will be able to fulfill the conditions to produce a sufficient number of animals as per SIGHT plan, the project may have to contract more than 3 BPs. Based on their genotype and performance, animals produced by the semi-elite farms will be certified as “Awassi Jordan or Awassi Jo” by Khanasrah station for their quality.

5. The programme will start with a survey to determine the phenotypic and genotypic characterisation of the Awassi sheep kept by the herders. It will be conducted among 400 randomly selected sheep owners from all 12 Governorates of Jordan. Herders who have proven and indigenous knowledge of the phenotypic of Awassi sheep will be selected from different parts of Jordan. SIGHT will support the Awassi breeding programme with the acquisition of 600 head of tested and certified pure Awassi sheep that will be distributed to the Khanasreh (400 head) and Fujij (200 head) stations. The Al-Wallah goat breeding station will be supplied with 200 pure Shami goats. The Musharfah station currently has imported improved Awassi therefore no new stocks will be provided. In close coordination with MoA, the Sabha station in Mafraq Governorate, will also receive 500 pure certified Awassi sheep, funded by the Hashemite Fund for the Development of Jordanian Badia (HFDJB) as part of the Geographic Indication for Awassi Sheep (GIAS) programme (see section on Geographic Indications below). The pure Awassi sheep (or Shami goats) acquired and distributed to the stations will be based on national screening and selection of high producing animals, followed by DNA testing for genetic coupled with phenotypic characterisation of the breeds. Mushafah will continue with “business-as-usual” along the MoA-driven, classic breeding programme producing improved animals and selling to herders.

6. The project will support Fujij to enhance its capacity to produce and sell improved animals to herders in south of Jordan. The breeding programme at Fujij will be managed by the MoA but will be monitored by the Khanasreh station, to ensure that the quality of improved rams at the 2 stations is monitored and is similar.

7. The ONBP will be established at the Khanasrah and Al-Wallah stations, for Awassi sheep and Shami goats, respectively, and will consist of 3 levels as indicated in Figure 4.1. At each level, a BP will produce improved Awassi sheep and Shami goats. By year five of the project implementation, all BP will be expected to be capable of producing elite animals.
8. The ONBP will be under the responsibility of the manager of Khanasrah station, with support from the Field Teams (see subcomponent 1.2) and Project management. Further support to oversee and guide the implementation of the ONBP will be provided through technical service providers and consultants (such as from Jordanian universities).

Outputs of the SIGHT breeding programme

9. At the Elite level, pure Awassi sheep will be produced at Khanasrah station and over the project lifetime, 1000 improved ram and 750 ewes will be distributed to farmers to roll out the improved sheep breeding programme. Additionally, 90 rams will be produced to be sold to the semi-elite producers. At the Semi-elite level, Awassi rams and ewes will be produced by the BPs (lead farmers, informal farmer groups and cooperatives) that have been certified by MoA. During the project lifetime, 1,120 Awassi rams and 1,120 ewes will be produced by these semi-elite farmers, cooperatives or associations and marketed to the beneficiaries. At the Base level, it is expected that during the life of the project, the improved genetic materials produced at Khanasrah station will be transferred to 90,000 ewes and the semi-improved genetic materials will be transferred to 300,000 ewes and more than 5,000 ewes will be inseminated using AI. An estimate of the total number of improved sheep produced by the breeding programme is presented in Table 4.1.

10. For the estimation of country needs for improved rams indicated in the table, calculations were done as follow: (i) assuming that the average flock size is 150 ewes (which is the approximate average of flock size ownership; (ii) each ram will inseminate 100 ewes only despite the effective capacity to inseminate 150 ewes. Accordingly 17,000 improved rams will be needed for the whole country based on the recorded total ewes of 2,549,565; and (iii) each sheep owner is given one improved ram regardless of the flock size which will mean that the country will need about 25,000 improved rams. This estimated figure will realistically be lower, closer to 21,000 improved rams.

11. Based on the above estimates, it is expected that SIGHT will be able to cover 12.5% of the country needs for improved rams and 21% of the needs of the 6 targeted governorates. It is estimated that to be able to cover the whole country within 11 years from the initiation of the project an additional 144 elite breeders besides the 18 ones to be established by the project (hence a total 162 elite breeding partners) will be needed.
Table 4.1: Estimating the Supply and Demand of Rams for the Breeding Programme

<table>
<thead>
<tr>
<th>Site of production improved ram</th>
<th>No. of improved rams produced during the project period*</th>
<th>No. of inseminated ewes by rams/6yrs**</th>
<th>Inseminated ewes by AI</th>
<th>Estimated no. of improved rams needed to cover all Jordanian flocks (refer to text)</th>
<th>Number of Improved ewes produced and sold to farmers by the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khanasreh station</td>
<td>1,000</td>
<td>150,000</td>
<td>5,000</td>
<td></td>
<td>750</td>
</tr>
<tr>
<td>Fujji Station</td>
<td>500</td>
<td>75,000</td>
<td>---</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>Elite farmers/ BP</td>
<td>1,120</td>
<td>168,000</td>
<td>---</td>
<td></td>
<td>1120</td>
</tr>
<tr>
<td>Total</td>
<td>2,620</td>
<td>393,000</td>
<td>5,000</td>
<td>21,000</td>
<td>2,270</td>
</tr>
</tbody>
</table>

* Information on flock size categories (number of owners with less than 150; 150-300; 300-450 heads, etc.) is lacking which does not allow for accurate estimation of the country needs for improved rams.

** Total ewes in the country are 2,549,565 (estimated as 80% of the total sheep flock).

12. For the continuation of the breeding programme beyond the project, the MoA and NCARE will be required to develop a plan to expand the production of improved rams through the following actions: (i) increase the number of elite farmers at all governorate gradually on a yearly basis to reach the targeted number; (ii) increase the size flock provided to elite farmers and/or establish AI unit in each governorate in order to reduce the number of years needed to reach the target number of improved rams. The use of AI is more economical for farmers especially for flock sizes with less than 30 ewes; and (iii) promote the idea for the private sector to invest in production improved rams and AI services.

13. Business plans for the breeding stations. The four stations that are supported will be responsible to develop business plans using TA and training provided by the project. These plans will guide management of the stations in the sustainability of their endeavours by ensuring that:

- The subsidized sale prices of the improved animals are affordable by smallholder farmers while not under-estimating their benefits improved productivity and profitability;
- Priority is given to the targeted smallholder farmers and households and only registered farmers benefit from the subsidized animals;
- Delivery of training on animal husbandry and health is effectively monitored and measured to maximize benefits from the investments in breed improvements;
- The stations prepare animal improvement and replacement plans with clear monitoring systems for the culling of poor or unproductive animals following receipt of improved ones; and
- An assessment of the prevailing market conditions to maximize on the returns on investment and to develop and maintain financial self-sufficiency through sales of animals. The business plans of the stations will be prepared in year 1 before any investment is made at for the stations.

14. Mechanisms of sales. Khanasreh and Al-Wallah stations will sell the improved rams and bucks to the elite lead farmers/breeding partners at 50% of its market value only during the first year. For the subsequent years, the breeding partners could either use AI provided for free from the stations or pay the market price to obtain more improved animals. The project will provide the breeding partners with certificate for the improved animals they produced and with that provide them with technical support and regular quality control. These elite herder will be expected to sell the improved rams to farmers at a price of up to 20% higher than the market price, since this should become their business. However, for the project duration, the breeding partners will be requested to provide priority to the small herders (target group) and this will be guided and monitored by the field support
teams (see Field Teams in Subcomponent 1.2). The field support teams will follow up with these small herders receiving enhanced breeds through extension support.

15. **Characteristics of the Breeding Partners.** Several Breeder Partners (BP) per governorate will be selected and contracted to participate in the ONBP. The individual farmers/herders or herder groups/cooperatives who could participate in the programme will be selected according to the following criteria:

i. that they will keep only the Awassi breed on their farm, without allowing interaction with any other breed to maintain genetic purity. In view of the unmet domestic demand for improved Awassi sheep and the opportunities lost in export markets due to poor quality of the animals, the use of the “Jordanian Awassi” for sheep produced at the semi elite level will be certified by the Khanasrah station;

ii. that they ensure the good health situation of the animals of high performance in terms of milk and meat production and keep regular technical and financial records on all activities undertaken on the farm as per recommendations and suggestions by the breeding stations;

iii. that they have proven good and long experience in animal raising; the team will conduct quick assessment to the farmers management (nutrition, vaccination program, productivity, culling the low producers animals);

iv. that they are committed to apply the nutrition and health program recommended by the Field Teams;

v. that they are willing and committed to exchange their experiences in animal breeding and husbandry to other herders (including through opening up their farms for visits by other farmers);

vi. that they have a vision to commercialize the produced improved animals; and

vii. that they have animal sheds to keep one ram with group of ewes during mating season and separate the rams from ewes out of the mating season.

16. **Technical support to the breeding programme.** The project will contract an experienced sheep breeder for MoA under a short-term consultancy of 2-3 months/year to:

(i) support the breeding stations in the development of their business plans; (ii) enhance the design and assist in the implementation and monitoring of the ONBP; (iii) analyse the data collected by staff in breeding stations for genetic evaluation and selection of the parents for the next generation; this will be done for the first and maybe the second year after which the local station staff will have been trained to undertake the analysis themselves; and (iv) provide inputs to the training needs assessment (see TNA below) and the ensuing of a training programme that will be implemented for the NCARE and MoA staff of the breeding stations to act as trainer of trainers. A computer program (ASremel) will be purchased exclusively for breeding data input and analysis and will be kept in the breeding stations with access for use by other stations and BPs.

17. Targeted training will be delivered to the staff in the animal breeding program as well as the Field Teams (as indicated under the section on Training Needs Assessment) and to the beneficiaries of the breeding program. Exchange visits to share experiences within and among farmers’ groups inside and outside the target governorates will be conducted. The project will use mainly the training modules and the approaches developed by international institutions such as ICARDA and FAO. Accumulated Progress will be continuously monitored, documented, and packaged as knowledge products.

B. **Strengthening sheep and goat breeding programme and stations**

18. The project will support the government to fine-tune and implement their Awassi sheep and, on a smaller scale, the Shami goat breeding programmes. It will enhance national capacity to produce and market pure genotypic and phenotypic sheep and goats with high productivity for milk, meat and reproduction of off-springs. Four breeding stations will receive support for rehabilitation Investments:
• Khanasrah Station for Awassi sheep; under NCARE; in Mafraq Governorate;
• Al-Fujij Station for Awassi sheep; under MoA, in Muan Governorate;
• Musherfa Station for Awassi sheep; under MoA, in Karak Governorate; and
• Al-Wallah Station for Shami goats; under MoA, in Madaba governorate.

19. All of the above stations as well as the Sabha station (for Awassi sheep) which is also in Mafraq Governorate, will receive selected animals which have undertaken DNA tests for genetic qualifications by SIGHT to be used for breeding in their stations, as part of the national breeding programme. The supported stations will hence only select and enhance the productivity of the local Awassi or Shami and not introduce new breeds. Sabha station, located in Mafraq Governorate, is a rangeland reserve station and will be receiving further infrastructure support from the Hashemite Fund for the Development of Jordanian Badia (HFDJB) to enhance its Awassi breeding programme especially for the Geographic Indication (GI) Awassi Programme (GIAS) being established (see GI below). All stations including Sabha will be part of the national small ruminant breeding programme, exchanging information and breeds, and they will be supported by the project through technical assistance to the breeding and training.

C. Training Center at Khanasrah Station

20. The Khanasrah Station being the main Awassi sheep breeding station will be further supported in the rehabilitation of its training center to improve delivery of training for both NCARE and MoA staff and to all producer beneficiaries. The center is about 200 m² and will be refurbished and equipped with requisite training aids. A rigorous training program will be implemented in this training center based on a Training Needs Assessment (TNA) for breeding and animal husbandry at the regional level (see section (h) below on Technical Assistance, Training and Capacity Building).

D. Improving diagnostic animal health laboratories and AI capacity

21. The laboratories of selected NCARE and MoA Directorates will be upgraded for their capacities for disease diagnosis through equipment and staff capacities. Support will be provided to the: (i) Khanasrah station, (ii) Irbid Agriculture Directorate (serving Irbid, Ajloun and Jerash), and (iii) Madaba Agriculture Directorate. Besides, the MoA's and NCARE's technical capacities to introduce AI services for sheep and goats will be strengthened by providing training to the public staff but also to available para-vets, lead farmers/herders and others interested capable of providing AI service as a business.

E. Rehabilitation of the MoA Quarantine and Animal Health Certification Facility in Mafraq

22. The quarantine facility in Mafraq has not been rehabilitated for several years. The capacity of the facility to function properly however has been limited due to the increased and expanded need for quarantine control of animal movement with the entry of Syrian flocks and for increased import of small ruminants to the neighbouring countries as well as with the limited shed space, funding and training received to its staff. For instance, the total exported animals during 2015 and 2016 reached 1,136,210 heads, while the present total area of animal sheds available for quarantines in the facility is only 5,000 m² with a capacity for 4,500 heads. Investments and technical assistance will be provided by SIGHT to support the upgrading of the facility and the establishment of a modest disease diagnostic laboratory in order to expedite test results that in turn will improve the processing of imported and exported animals. This will also include capacity enhancement activities related to monitoring and control services.
F. Geographical Indication (GI) for Jordanian Awassi Sheep (GIAS)

23. This activity will link the national Awassi breeding programme with the Geographic Indication (GI) for Awassi Sheep (GIAS) programme which will be jointly implemented by the Hashemite Fund for the Development of Jordanian Badia (HFDJB) and MoA. The nomenclature “Awassi Jo” will be given to the meat produced by the Awassi sheep that are born, bred, and registered in Jordan. The GIAS programme will start later in 2017 following the findings of a study that will be undertaken by a hired GI consultancy firm to identify both technical and legal requirements for achieving the overall objective of the project i.e. identifying the genetic character of Jordanian Awassi sheep and laying out the foundations and roadmap for registering Jordan Awassi sheep meat under the GI law no. 8/2000.

24. The GIAS project will be initiated with the survey to determine the genotype and phenotype of the Jordanian Awassi in close coordination with SIGHT. The project will work closely with GIAS to support the programme mainly through the genotypic-phenotypic testing to assess the presence of special distinctive features that can be used to identify the Jordanian breeds, which is part of the activities of national Awassi breeding programme. Sabha Station, under HFDJ in Mafrak Governorate, will be the GIAS breeding station, and which will receive 500 Awassi Sheep through its own budget. SIGHT will support the GIAS breeding programme through t coordination mechanisms followed between Khanasreh, Fujaj, and Al Walah stations and will hence cover the exchange of information and breeds. Support will also include technical assistance to the breeding programme and training for its staff with the other stations. Besides, SIGHT will build the capacity, raise the institutional and public awareness and support the administrative and technical capacity of the GI Division of MoA in its efforts to expand the marketing opportunities of high-quality Jordanian agricultural products.

25. The process for obtaining GI will extend beyond the 6-year implementation period of the SIGHT, and will be the sole the responsibility of the MoA’s Division of Geographical Indications. SIGHT will provide resources that will cover the general survey and registry of genotyping of the Jordanian Awassi sheep at a national level and the training needed for the Sabha station staff. Accordingly SIGHT’s contribution will be mostly at the initial stages of the GI program to develop a Road Map for the trade mark/registry system of Awassi sheep and will not provide any resources for these latter stages that will be maintained by MoA. Collaboration between SIGHT and GIAS will be facilitated through including HFDJB in the SIGHT technical committee and highlighted the role of HFDJB in the agreement of SIGHT.

G. Improving Animal Traceability

26. Jordan is the first Arab country to have initiated a system of traceability of its animals through the establishment of the National Animal Identification System (NAIS). Adopting a tracking system for animal products to increase their penetration in non-traditional markets is an explicit objective of the Jordan Economic Growth Plan (JEGP). However, the current system suffers from several constraints given that the field staff has to enter all records on a manual basis and it is difficult to regularly update the records after the sale or slaughter of animals, as this is rarely reported to eliminate the tagged animals from the registry under the name of the farmer. Besides, not all farmers register the new-born animals especially when they intend to sell them after few months for fattening or slaughtering. Besides its importance in traceability, the NAIS is used by the government as a basis to manage and control the public feed subsidies and vaccination support to registered animals. Despite the weaknesses of the system, NAIS has been instrumental in the management of the subsidies and traceability of animals.

27. Among the present weaknesses of the system is its susceptibility to errors and delays in entry of data manually. SIGHT will assist the MoA staff mainly at the Governorate level with an innovative way of entering the data using Android Tablets which will have stored digital data of all the livestock owners with geo-referencing. Using the Form Agent front-end software, staff of the MoA Governorates undertaking control visits to herders, will directly update the information of sold or slaughtered animals or new-born and newly registered animals with their tag numbers on the Android Tablets directly in the field. Special training sessions will be provided to field teams on the use of this software with technical backstopping provided for the initial period. The Tablets will be equipped with specialized internet data SIMs to enable data transmission through internet to the cloud-based backend Form Agent Server at the MoA along with the GPS coordinates of the location where data is entered. The transmitted data will be stored on the server and secured for the life of the project. Once data is uploaded, it will be integrated in the NAIS registry, checked for data consistency and quality and will be available further for analysis. The data can also be used to monitor the trends in herd size, consumption and trade. SIGHT is suggesting this system to be designed through South-South Collaboration with countries such in Pakistan that have designed and implemented similar systems.

H. Technical Assistance, Training and Capacity Building (USD 526,000)

28. All beneficiaries of Component 1, including MOA and NCARE staff, men and women individual livestock owners and the members of cooperatives and associations participating in the breeding programme will receive tailored support to develop and enhance their skills and capacities based on their needs. SIGHT will ensure that at least 40% of trained beneficiaries are women and that at least 30% of the training provided to farmers will be targeted to farmers owning 50 or less heads of small ruminants. Study tours will be carried out to benefit from the experiences of countries in the region that have similar agro-ecologies and development levels.

29. The training programme will be based on a Training Needs Assessment (TNA) that will be conducted in YR1 of project. This assessment will guide and tailor training delivery programme according to the actual needs of the stakeholders. The training package for MOA, NCARE staff, FTs, Lead farmers and cooperatives could cover, among others:

30. Advanced livestock management; animal disease diagnostic and surveillance; zoonotic diseases; artificial insemination (AI); training on ASreml software and its applications in animal breeding; animal nutrition and computerized formulation of animal ration; poultry genetic and diseases; grazing management; improving the nutritive value of the agriculture by-products (including feed blocks and silage); business planning; communication skills for technical staff; climate change and its impact on livestock production; Monitoring and evaluation in livestock projects; social mobilization skills and working with women; enhanced governance of cooperatives and groups.

31. The project will also contract an experienced small ruminant breeder who will be competitively selected for a short-term consultancy of 2-3 months/year to support the breeding stations in refining the design of the breeding program, and support in the analysis of the collected data from the breeding program (elite and semi-elite stages as well as from the farmers). This consultant will provide inputs to the TNA and the training of trainers program. That will be implemented for selected NCARE, and MoA breeding stations’ staff as well as the FTs and the BPs. These staff will provide training to the participants in the semi-elite and on farm breeding programs. Other training needs for the public and private sector stakeholders and beneficiaries will be identified during the implementation of the project.

32. **Advisory services to farmers by FTs.** A package of animal health and management technologies will be introduced to the recipients of the improved livestock programme. The FTs will be responsible for the delivery of extension services to farmers, beneficiaries of SIGHT. They will be responsible for training farmers on these technologies, follow-up with them on a day to day basis for the
implementation of the recommendations and maintain records on the adoption and benefits achieved to feed into the M&E system of SIGHT. Animal health services on the other hand, will be provided by the Governorate and district veterinarian clinics.

33. **Sub-component 1.2. Improving Community and Private Sector Services (USD 3.68 million).** The main activities undertaken under this sub-component will be: a) Establishment of Field Teams (private and government staff); b) Pilot investments in and around rangeland reserves and c) Enhancing livestock nutrition activities.

34. **Field Teams (FTs).** The main purpose of establishing these teams will be to establish a system of public-private partnership to support the project enhance its delivery and outreach to the target groups. The field teams will be composed of 3 Farmer Support Teams (FSTs) that are hired full-time by the project and the 6 Government Field Teams (GFTs) who are government employees dedicating part of their time fully to the project. The FSTs and GFTs will work together as one Field Team (FT) with a joint work and delivery plan and will report to the PMU. The PMU will assign one staff among the FTs (selected from the FST members) as a coordinator within each of the 3 Governorates who will be responsible for reporting directly on the FT activities to the PMU. Meetings between the FT coordinators and with the PMU will be done on a regular basis as described in the Project Implementation Manual. The FTs will have the responsibility, among others, to support the breeding plan of the MoA and NCARE in identifying and follow-up with the breeding partners at the semi-elite stage, raise awareness with farmers on the importance of the improved breeds, support, train and mentor farmer cooperatives, farmers, women and youth receiving improved breeds or grants/loans related to small ruminants, in animal health and nutrition (for both components 1 and 2). The FTs are expected to assist small ruminant farmers in bringing about behavioural change in their animal husbandry. The FT will be established as follows:

- **Farmer Support Teams (FSTs) (USD 1.121 million).** Three Farmer Support Teams (FSTs) will be established in each of Mafraq, Irbid and Madaba to cover all 6 targeted Governorates. Each FST will be composed of one livestock production specialist, one veterinary/animal health specialist and one community mobilization specialist (who will be a woman). The staff of the FSTs will be recruited on a competitive basis with performance-based contracts. The FSTs will report fully to the PMU.

- **Government Field Teams (GFTs) (USD 1,750 million).** In each of the targeted Governorate, the Agricultural Directorates of the MoA and NCARE will establish Government Field Teams (GFTs) which will comprise 2-3 designated staff that will work on a part-time basis with the project. The GFT staff will retain their salaries from the government and receive additional allowances from SIGHT. Each GFT will include some of the following specializations (depending on the relative needs in the governorate): a veterinarian, a small ruminant husbandry specialist (production and nutrition and a crop specialist).

35. The Field Teams (FTs) will be responsible for the following tasks:

   a. Disseminate of information and raise public awareness about the scale, scope and overall benefits of the SIGHT, with special focus on women and youth.

   b. Support breeding stations in identifying eligible breeding partners (BP) from the private producers such as the lead farmers or small ruminant cooperatives/ groups based on the specified criteria (indicated above).

   c. Support the MoA, NCARE, and the Jordan Cooperative Corporation offices in the target Governorates in the selection, assessment and support of groups or cooperatives that are eligible to participate in the various components of SIGHT (BPs, rangeland and nutrition activities); the community mobilization specialist will have an active role in the support to the
groups and cooperatives in close collaboration with specialized TA, recruited to enhance their governance structures based on the institutional assessments undertaken.

d. Undertake awareness raising campaigns for small ruminants owners on the importance of enhanced breeds and husbandry for productivity increase and facilitate their visits to the research stations and farms of elite herders and breeder partners.

e. Follow-up with the BP to ensure that they abide by the requirements set by the breeding stations on their farms to produce quality improved breeds from parents received that are able to become certified by the breeding stations accelerating the availability of the improved animals to a larger number of farmers.

f. Ensure that the BP are keeping records of inputs, management and husbandry practices on farm, on the performance of the elite animals received and their progenies, as well as information on the destiny of the sales of the semi-elite animals, with priority given to the small scale herders (name and address of farmer, number of animals owned, price sold, etc.).

g. Support the breeding stations and BP in the targeting strategy ensuring that smallholder herders, and especially women, are prioritized for receiving improved animals.

h. Support the sheep government stations (for elite breeds) and the breeding partners (semi-elite breeds) in the monitoring the replacement of poor producing animals with the improved ones in farms receiving improved breeds.

i. Support the research stations in identifying 2 lead farmers in each governorate who will receive improved breeds and who are ready to undertake on-farm trials to compare the productivity (data on milk and meat production, birth rate and weaning weight, etc.) of these breeds under recommended husbandry practices with that of the local animals kept under standard farmer procedures. Data will be collected over 4 years. The field teams will be responsible for the follow-up with these lead farmers, ensuring that detailed data are collected and records are kept, reporting the results to the stations and to the M&E system of SIGHT.

j. Provide all project beneficiary farmers receiving improved animals with extension support in (i) sheep and goat production, (ii) animal nutrition and feeding, (iii) forage crop production; (iv) livestock health and husbandry including AI; (v) herbal and medicinal plants harvested from rangelands or cultivated; (vi) small-scale irrigation; and (viii) promoting water saving technologies.

k. Support the rangeland departments in working with communities and farmers using government rangeland reserves through the establishment of demonstrations.

l. Provide technical husbandry support to recipients of livestock packages under the graduation subcomponent for Syrian refugees and Jordanian host communities.

m. Ensure, especially through the community mobilization female member of the FTs, that special attention is given to the communication with women farmers, in order to understand their needs and concerns and address them through SIGHT interventions.

36. Considering the large responsibilities and tasks of the FTs and their crucial role in the success of the project implementation, SIGHT will make sure that they are provided with the needed targeted training at the initiation of the project and throughout the duration of the project implementation as deemed necessary. The PMU could include some external national experts known for their integrity and partiality and knowledgeable of sector in Jordan to participate in their selection and recruitment.
37. **Pilot investments in Rangeland Reserves (USD 270,000).** The project will pilot investments for improving access to water and improvement of rangelands in three selected government rangeland reserves in 3 Governorates, namely Rajib in Ajloun, Duba’a in Amman and Al-Faisaliah in Madaba. The investments will include the following activities:

- **Water harvesting infrastructures.** Rainwater collection wells or hafeers for water harvesting for animals in the rangelands at about 10 to 15 locations around each reserve or other suitable location will be established through coordination between water harvesting & rangelands departments in MoA. These will be used by herders who incur significant costs in searching for water when herding their animals in the rangelands around and in the selected rangeland reserves.

- **The regeneration of rangelands** will be undertaken in areas designated for the purpose by the rangeland department of the MoA in close collaboration with local communities and tribal leaders. The table below provides an indication of the total area of each of the 3 selected rangeland reserves, the respective number of herders who will benefit from the interventions and the total number of animals allowed to graze in the reserve annually. These plantations will be piloted in the target reserves using the combined experience of MoA and NCARE. It is expected that 300 dunums will be planted in Rajib, 200 in Duba’a and 300 in Al-Faisaliah. Planting material, i.e. seedlings and seeds, selected will be those that are most appropriate for the fragile eco-system of the rangelands.

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Rangeland reserve</th>
<th>Area (donum)</th>
<th>Targeted area for rehabilitation (du)</th>
<th>No. of beneficiary herders</th>
<th>Number of animals allowed to graze in the station/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajloun</td>
<td>Rajib</td>
<td>5,000</td>
<td>300</td>
<td>10</td>
<td>2,000</td>
</tr>
<tr>
<td>Amman</td>
<td>Dubba’a</td>
<td>3,000</td>
<td>200</td>
<td>20</td>
<td>5,000</td>
</tr>
<tr>
<td>Madaba</td>
<td>Al-Faisaliah</td>
<td>20,000</td>
<td>300</td>
<td>30</td>
<td>20,000</td>
</tr>
</tbody>
</table>

38. The project will use the simple micro-catchment approach and use the seeds of native species or those species available at the nurseries of the Ministry of Agriculture will be used, with focus on species palatable for grazing animals to be used for intensive plantations, in addition to seeds of native flora that are important for the restoration of degraded areas. In each newly designated area an inventory of the existing flora will be conducted (as described below), followed by the preparation of a participatory community development plan that will be implemented jointly with the communities. A proper monitoring and impact assessment plan will also be established for these activities and data collected will feed into the SIGHT M&E system. Lessons learnt from this experience will be shared and disseminated.

39. In each newly designated area, an inventory of the existing flora will be conducted for the following:

- Determination of floral cover of the 3 study areas using Floristic method.
- Estimation of various indices of diversity of wild plants.
- Collection of information about status of the vegetation cover and threats and determination of hotspots for conservation and use.
- Collection of seeds and preservation in ideal conditions and of herbarium specimens representative to the designated areas for further taxonomical studies.
Use of the results in setting recommendations for future studies and management and protection.
Using the collected seeds in restoring habitats.

I. Enhancing livestock nutrition (USD 176,000)

40. The full expression of the benefits from the enhanced livestock breeds will only be possible if these animals are exposed to good husbandry, both through proper health and nutrition management of the flock. Support to veterinary health services in the project targeted area is relatively acceptable and will be handled by the staff of the Directorates of the MoA in the Governorates, NCARE and private vets. The sector will be supported by SIGHT through providing specialized training to the vets and the public diagnostic laboratories will be upgraded. Registered farmers in Jordan get free vaccinations (minimum requirement is 3 vaccinations and the maximum received is 5) for their tagged animals, otherwise farmers use the private vets for support. Problems arise when vaccines are not available on the market or their quality is not very reliable. Farmers revert to both public support of veterinary services and the private clinics and veterinarians to provide the needed health services and vaccines, the latter upon payments. In both the cases, however, especially the public services health support services still do not cover completely all the needs, especially with the limitation of staff number and their mobility.

41. Nutrition on the other hand seems to be more of a problem for the following main reasons: (i) farmers rely mainly on barley and wheat bran for feed, especially that these items are subsidized by the government; (ii) the option of using rangelands is drastically diminishing as they are heavily degraded and climate change is making the situation worse; (iii) lack of sufficient awareness of the farmers of the specific feed requirements of the animals that are required during different physiological stages; and (iv) the effect of poor nutrition is not necessarily immediately obvious to the farmer but will be manifested mainly through closer observations of such factors as reduced growth rate, reproduction and milk productivity and susceptibility of diseases.

42. This subcomponent seeks to support innovative approaches for the provision of nutritive feedstuff to farmers beyond barley and wheat bran. Support will be provided in the form of grants to farmer groups or cooperatives, who provide in-kind contribution and 30% cash of the cost as cost-sharing, to implement a project for the production of feed for their members as well as for sales to other farmers at reduced prices. Projects will be encouraged to utilize agricultural by-products to be included in animal rations. These by-products will be transformed in efficient ways and transformed to enhance their digestibility through such processes as (i) processing into silage specially for the vegetables residues and any other available green forage; (ii) grinding and mixing with barley and wheat bran, (iii) processing as feed blocks (rich in salt and mineral and contains any available feed ingredients); (iv) increasing the nitrogen percentage in straw and olive oil pulp by treating with urea; and (v) adding minerals and vitamins to the animal ration and use salt blocks (include salt and trace minerals) to avoid effect of mineral and vitamins deficiencies.

43. The grants will be announced through the Field Teams, the directorates of the MoA, NCARE and the Jordan Cooperative Corporation offices in the target Governorates, who will assist the project in the selection of groups or cooperatives which are functional, have more than two years of experience and who are financially sound. The grants will be at a cost-sharing basis and will be provided to projects with a clear feasibility study and which propose innovative solutions or the utilization of agricultural by-products to be included in animal rations either directly or transformed in efficient ways to enhance their digestibility and accessibility. SIGHT will aim at supporting at least 2 projects from each of the targeted governorates and preferably covering different agro-ecosystems. Agriculture cooperatives, farmer groups or individual entrepreneurs from the different targeted governorates, will be supported by the FTs to prepare a business proposal for these projects. The proposal will be evaluated for financing by the PMU with the technical support from external experts and their approval will take into consideration the following criteria:
- The total cost of each of the proposals will not exceed USD 10,000 to USD 12,000. SIGHT will cover 70% of the cost while the beneficiaries (cooperative/farmer group, entrepreneurs) covers the remaining 30% in cash.
- The project will be able to show results within the duration of the project and should not exceed the SIGHT period.
- The managerial, governance and technical capacity of the cooperative/farmer group or entrepreneur.
- The capacity of the cooperative or group to cost share (30%) and provide in-kind contribution will be assessed.
- The potential outreach (number of farmers and area) of the benefits of the project to the cooperative/group members and the surrounding livestock producers.
- The feasibility of the business proposal including its impact and sustainability beyond the project period and the inclusion of an operation and maintenance plan for the equipment or infrastructure.
- The potential of the business proposal to provide employment and labor opportunities to a number of youth, especially from Syrian refugees...

44. Pre-assessments will be done of the group by the FTs and a more detailed assessment of the applicants’ capacity will be undertaken by the PMU upon submission of the proposal. Based on the identified managerial, business or technical needs for the success of the project, training and mentoring will be accordingly provided to the applicants before the initiation of the project and during its implementation.

Component 2: Livelihood Investments and Access to Financial Services

45. The objectives of Component 2: Livelihood Investments and Access to Financial Services (USD 13.63 million) will be to provide support to households at different gradients along the poverty spectrum. This includes the highly vulnerable Syrian refugees, the local host communities and individual entrepreneurs in need of loans for their enterprises. The project will support the extreme poor and poor households out of poverty to a more stable state through a comprehensive Graduation Approach that includes a holistic set of services such as consumption support, savings plans, livelihood trainings, and productive asset transfers. By investing in this multifaceted approach, the project will strive to eliminate the need for long-term safety net services. The target group of the graduation sub-component will be the Syrian refugees and Jordanian host communities. In addition, financial services will be provided for smallholder farmers and young men and women who have the risk appetite and capacity for micro and small enterprises to initiate or expand agricultural businesses and off-farm activities.

46. The Livelihood Investments and Access to Financial Services Component of SIGHT will consist of two complementary subcomponents reflecting the two-pronged approach that will target the extreme poor and poor rural residents, on the one hand, and low-income smallholder farmers and rural entrepreneurs, on the other:

(a) **Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods** (USD 9.73 million) will target 3,650 rural residents – vulnerable women and youth from among the Jordanian host communities and Syrian refugees with grant-based income-generating packages for on-farm and off-farm livelihoods.

(b) **Subcomponent 2.2: Lending Facility for Rural Businesses** (USD 3.9 million) will target 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement. The loans will be provided by professional financial service providers (FSP) – banks and microfinance institutions (MFI) experienced in working with micro and small enterprises in rural areas.
47. **Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods (USD 5.7 million)**. This subcomponent will be based on a proven Graduation into Sustainable Livelihoods Approach that consists of a carefully sequenced, multi-sectoral intervention comprising social assistance to ensure basic consumption, skills training, seed capital, and employment opportunities to jump-start an economic activity, financial education and access to savings, and mentoring to build confidence and reinforce skills. According to CGAP, the Graduation Approach should lead with consumption support, either direct food aid or cash. Recent behavioural research confirms that unless immediate consumption needs are addressed, people make sub-optimal economic decisions due to stress and a “tunneling” syndrome where their time horizons shorten to just managing the next crisis. Once the consumption needs have been sufficiently addressed, the Graduation Approach provides support for saving money (a vital tool for risk management), an asset transfer (usually in-kind assets such as livestock), skills training, and regular coaching and encouragement. The goal is for participants to “graduate” to a sustainable livelihood within a defined period of time (generally 18 to 36 months). Based on 10 pilots in 8 countries, CGAP reports 75-98% “graduation” rate for the beneficiaries of the Graduation Approach programs – entrepreneurial low-income people. Given the additional challenges related to circumstances of Syrian refugees, the success rate of this subcomponent is expected at the level of 70% of “graduated” beneficiaries defined as those with sustainable business activity providing stable and sufficient household income.

**Figure 4.2. Graduation into Sustainable Livelihood Approach**

Source: CGAP 2016.

48. This Graduation approach will address the key challenges faced by women and youth that include the lack of access to capital required for investment in microenterprises, lack of knowledge and skills and susceptibility to economic shocks. Some of these challenges are intensified for Syrian refugees who also face additional challenges such as lack of work permits and licenses as well as restrictions on permissible occupations. The subcomponent will provide up to USD 3,000 to help bring livelihood opportunities to a level whereby they can sustain livelihoods of Syrians and help them improve their consumption and enhance food security. For the local Jordanians, the approach promises to increase their income and employment opportunities and facilitates the formalization of their enterprise and small businesses and can also link them with formal finance opportunities., should they wish to borrow to grow their businesses The Graduation into Sustainable Livelihoods Approach is a unique approach which has not been tried in Jordan before, and lessons will be documented to

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share and examine the potential for scaling up given the potential to use it as a means for poverty alleviation for the large vulnerable refugee population and the extreme poor in the country who rely on safety nets and the NAF.

49. **Beneficiaries.** Under Subcomponent 2.1, livelihood packages provided to 3,650 beneficiaries will address the gradual steps of the Graduation Approach based on the analysis of any prior assistance received by these beneficiaries (e.g. consumption assistance or any basic financial education training likely provided by local NGOs). The sub-component has USD 5.7 million available from existing sources and an additional USD 6.5 million will be mobilised to meet the financing gap. This sub-component will benefit 3,650 (1,050 from existing funds and 2,600 from additional financing) vulnerable women, men and youth with grant based income-generating packages for on-farm and off-farm enterprises and employment opportunities. Two thousand six hundred and fifty graduation packages will be for the poor. Fifty percent of these packages will be for Jordanian host communities and fifty percent for Syrian refugees. One thousand packages will be for the extreme poor. The type of package provided to beneficiaries will vary depending upon the classification of each household with the packages ranging from USD 3,000 for the extreme poor to USD 2,000 for the poor. Among the extreme poor who will be targeted, 70% will be Syrian and 30% from Jordanian host communities. Both packages will be provided to 50% women and 50% men; of the latter, half will be youth (i.e. 25% of the total number of recipients). This subcomponent will help create 3,650 jobs mainly through self-employment.

50. **Subcomponent 2.2: Lending Facility for Rural Businesses (USD 3.9 million)** will target about 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement, feed supply and other ancillary activities. The main objective of this sub-component is to demonstrate to the commercial banking and microfinance sector that the agriculture sector is a promising sector for growth and that directing additional funds to it can help grow their business and meet the Government's objective of increasing the growth rate in agriculture.

51. There is a strong local capacity to implement the proposed lending activities. Though Jordanian FSPs (banks and MFIs) have not had much experience working in agriculture, they recognize this as a sector with big demand and untapped potential. Both banks and MFIs in Jordan have solid financial standing and have started reaching into rural areas with various products for micro and small businesses. A notable example of this outreach is a successful World Bank MSME Development Project for Inclusive Growth implemented through the wholesale facility of CBJ. Since 2013, the project has disbursed over USD 118 million in loans to 12,222 MSMEs through 9 banks, including Islamic banks offering Sharia-compliant products, with several banks on-lending to microbusinesses through MFIs. About 65% of the World Bank project beneficiaries are located outside Amman, which aligns well with the objectives of Subcomponent 2.2. Average interest rates on loans to the end beneficiaries range between 4.25 and 6% per annum.

52. **Beneficiaries.** Five hundred and fifty micro and small enterprises with loans for on-farm and off-farm activities, including 30% of women (women-owned or women-managed businesses). Financial service providers (banks or MFIs) will be requested to provide loans to about 133 smallholders to improve small ruminants' breed, as well as to 290 micro and 145 small rural businesses. These figures and loan purposes are indicative and will be presented to FSPs so as to orient them to this target groups, but ultimately FSPs will provide loans to micro and small rural businesses based on demand.

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107 While MFIs are eligible under the World Bank project, they are currently undergoing licensing by the Central Bank of Jordan. This process is expected to be completed by mid-2017.
Appendix 5: Institutional aspects and implementation arrangements

A. Overview

1. This Appendix describes the project management arrangements for the Small-ruminant Investment and Graduating Households in Transition Project (SIGHT) that will be implemented over 6 years. Implementation will be guided by the Project Implementation Manual (PIM) and will be flexible enough to allow the project to benefit from the opportunities presented to the implementing partners to incorporate lessons from the field as they emerge and accommodate operational constraints and challenges. The effective management of the implementation of SIGHT will use the strong sectoral mandates and comparative advantages of the implementing partners, namely MoA, NCARE, and CBJ. The key institutions that will partner with IFAD in the implementation of the SIGHT Project for Component 1 are the Ministry of Agriculture (MoA) and NCARE. However, it is expected that smallholder farmers, elite farmers, agriculture cooperatives, private entrepreneurs and communities in the rangelands will play a critical role in the outreach and innovation in the project. The project will also work with several key partners such as the Hashemite Fund for the Development of Jordanian Badia for specific components of the project. NGOs and Technically qualified service providers who are familiar and have experience in the implementation of the Graduation approach will implement the activities of the project. The Central Bank of Jordan (CBJ) will be expected to disburse the line of credit through its partner commercial banks and MFIs. Collaboration with EBRD for free-of-charge business training for entrepreneurial Syrian refugees was explored and will be utilized where appropriate.

B. Institutional Landscape

2. The Ministry of Planning and International Cooperation (MOPIC). MOPIC coordinates and directs developmental efforts through planning, execution, monitoring and evaluation of social and economic development plans, in coordination with the public and private sectors, and civil society organizations. MOPIC plays a major role in SME development and is responsible for legal regulatory reforms affecting the business environment, microfinance strategy, as well as local economic development in pockets of poverty. MOPIC will play an overall role of oversight and guidance.

3. Ministry of Agriculture (MoA). The Ministry is the counterpart of IFAD for the SIGHT and will be the main implementing partner for the project. The PMU for the project will be housed in the MoA. Its functions are mandated by the Agriculture Law Number 13 that was revised in 2015 and covers responsibilities for regulating the agricultural sector and designing and implementing agricultural sector policies and strategies in Jordan on crop, livestock, rangeland and forestry. The MoA cadre comprises the Minister, the Secretary General and seven Deputy Secretary Generals. The Minister of Agriculture chairs the management boards of NCARE, ACC and JCC. The MoA headquarters are located in Amman, with 38 directorates and central units that represent all agriculture sub-sectors including but not limited to rangelands, forest, agricultural marketing, livestock, plant production and protection, water and irrigation, agricultural projects, etc.

4. MoA carries out its mandate in the field through the 12 Directorates of Agriculture at Governorates’ level and 30 Agriculture Directorates at the district-level. There are 13 nurseries and their stations that belong to the MoA, which produce olive and fruit trees and forest trees and rangeland shrubs. The sheep and goat breeding stations are designated to produce improved sheep and goat for sale to herders. The MoA is also responsible for all official agreements related to food and agriculture with regional and international partners such as the Ministries of agriculture, organizations, and institutions. A new thrust of the MoA is the
establishment of the Geographical Indications Division (GID), in the International Cooperation & Trade Agreements Department in 2011. This mandate covers improving the quality schemes of various agricultural products to reach to collective trademarks system as defined in the GI Law No. 8/2000. MoA delivers several public services to farmers: (i) diagnosis and control of animal and plant diseases and infections, (ii) laboratory analyses for plants and animals, (iii) combating desertification and protection of the biodiversity, (iv) implementation of domestic and donor funded development projects, (v) generating and disseminating sectoral data and information, (vi) lease/ rent of agricultural machinery to small farmers, (vii) production and distribution of forest trees and rangeland shrubs for free, and (vii) production and distribution olive and other fruit seedlings at subsidized prices.

5. The National Centre for Agricultural Research and Extension (NCARE). The centre is a semi-autonomous institution under MoA and receives its budget from the GOJ. Other sources funds are national and international donors for financing the implementation of projects. The NCARE's headquarters are in Amman with eight regional centers located in the Governorates of Dair Alla, Ramtha, Mafraq, Mshaggar, Rabba, Tafilleh, Wadi Araba and Shobbak. NCARE also operates 13 research stations representing different agro-ecological conditions and extension field units throughout Jordan. The mandate of NCARE is to conduct applied agricultural research and extension services. NCARE supports agricultural research, focusing on all key areas. Extension officers supported by the researchers transfer technology, knowledge and training to farmers. NCARE has a wide range of relationship with international, regional and national institutions and organization such as FAO, IFAD, ICARDA, USAID, JICA, UNDP, WB and ACSAD. NCARE trained many technical staff from the region on different agricultural topics. NCARE is a partner in the on-going IFAD project titled REGEP and is responsible for conducting the Farmers Field Schools component. NCARE will have specific responsibilities for some of the selected activities and sub-components of the SIGHT project.

6. The Hashemite Fund for the Development of Jordanian Badia (HFDJB) was established in 2003, with the objective of developing the Jordan Badia. The overall objective of the Fund is to improve the socio-economic conditions in the Badia by building the capacities of local communities and implementing well-planned projects in various relevant sectors such as the cultivation of fodder, date palm, herbal and medicine plants. The HFDJB has strong relationship with the local communities in the Badia. With the MoA, it is initiating a project on GI for Jordanian Awasssi sheep at Sabha station. There is expected to be close coordination between the SIGHT project and HFDJB in developing an approach of outreach to the smallholder ruminant farmers for the development of the GI for Awassi sheep and for developing the trade mark for Awassi Jo with its distinctive attributes.

C. Specific Arrangements for Component 1: Investment in Farmer Services

7. Overview: MoA and NCARE have directorates for tenders and maintenance with qualified staff, the two directorate in cooperation with the technical staff at stations and veterinarian departments at governorate will prepare a detailed report on the station's, quarantine and lab's maintenance needs, the equipment needed for labs, roughly estimation of the cost and call for bids. Provisions will be made for studies, surveys, regular on-farm data collection, technical support and training for the design and operation of the project M&E system. The PMU will ensure the timely establishment of agreements between MoA and NCARE and implementing partners such as NGOs, CBOs, HFDJB, and service providers for business development plans. A description of the specific tasks of each implementing partner and the supporting role of each are given in Appendix 5.1.

8. Field Support Teams (FSTs). The existing Government breeding stations have limited outreach at the field level to support improved animal husbandry services and techniques to smallholder farmers. The SIGHT project will put in place field teams that will enable outreach of the improved capacity and breeds to the smallholders. The main purpose of establishing these
teams will be to establish a system of public-private partnership to support the project in enhancing its outreach to the target groups. The Field Teams will be composed of 3 Farmer Support Teams (FSTs) that are hired full-time by the project (9 staff in total) and the 6 Government Field Teams (GFTs) who are government employees dedicating part of their time fully to the project (15 staff in total). The FSTs and GFTs will work together as one Field Team (FST) with a joint work and delivery plan. Both will report directly to the PMU; the GFTs however, will report to the PMU, the specific work related to the project as per work plan while they continue to report on their regular work to their respective directorates in the targeted governorates. The FSTs will have the responsibility, among others, to support the breeding plan of the MoA and NCARE in identifying and follow-up with the breeding partners at the semi-elite stage, raise awareness with farmers on the importance of the improved breeds, support, train and mentor farmers and farmer cooperatives receiving improved breeds in animal health and nutrition (FST tasks are detailed in Annex 4). The FSTs are expected to assist small ruminant farmers in bringing about behavioural change in their animal husbandry practices.

9. Geographic Indication. The MoA is the agency responsible for coordinating and implementing the GI programme financed by SIGHT and HDFJB. The Hashemite Fund will be a member of the technical committee of the SIGHT project to facilitate coordination. The PMU will work closely with the MoA and the HDFJB to capitalize on the survey and studies that will be undertaken by the project in this regard. FT and station staff supported by technical expertise of SIGHT project will conduct a survey across Jordan and interview herdsmen with long experience and knowledge in phenotypic characterization of pure bred Awassi. The project will assist in collecting 400 blood samples from a pure and non-pure Awassi. The samples will be analyzed at one of Jordanian universities for genotype characterization. SIGHT will help in the formulation of a road map for the GI, branding, marketing and identification of the legislation required to support the process. HDFJB will register the GI for “Awassi –Jo” based on the results of the surveys to assess the genotype and phenotype of the sheep breed. HDFJB will sell improved Awassi rams from the Sabha station to cover the north Badia of the country to elite farmers who will participate in the GI project at Badia where SIGHT does not reach directly.

10. Improving Animal Traceability. This sub-component will be implemented by the MoA with technical support, equipment, software design and questionnaire development through the financial resources of SIGHT. The project will identify expertise from one of the countries in the region to facilitate South-South collaboration. India and Pakistan both have significant expertise in developing android applications linked to a server to assist in the real time data feed to enhance the reliability and technical capacity of the NAIS. SIGHT will assist the MoA staff mainly at the Governorate level with an innovative way of entering the data using Android Tablets which will store digital data of all the livestock owners with geo-referencing. Technology Directorate and Department of programming and system analysis at the MOA will work with South-South technical assistance to determine the technical specification of the Tablets, upgrade the available software and adaptation to the tablets. The SIGHT project will arrange for technical assistance to train NAIS staff at the governorate and at the MOA on using the Android Tablets for data entry of animal identifications and traceability in the field. Expert from the selected country will be identified by the PMU which will also arrange the procurement of the equipment with the right technical specifications.

11. Rangeland Reserves Development. The Technical team from the Department of Rangeland and Department of Water harvesting at the MoA, The Rangeland Divisions at the Governorate Agriculture Directorate, Livestock & Rangeland and Biodiversity Research Departments in NCARE will identify the type and location of the water harvesting schemes inside or outside the targeted reserves depending on the assessment of the water flow of the targeted micro watershed catchment. Water harvesting will include either Hafeers or wells depending on the expert assessment of the soil and the typography of land. MoA will prepare the water harvesting design and call for bids. NCARE will be responsible for all technical aspects in
rangeland activity with emphasis on studying the flora cover at the targeted sites. Estimation of various indices of diversity of wild plants, collection of information about status of the vegetation cover and threats and determination of hotspots for conservation and use, collection of seeds and preservation in ideal conditions and using the collected seeds in restoring habitats. Regeneration of the rangeland at the selected sites will be achieved by planting selected seedlings produced in MOA nurseries and seeds collected from the targeted reserves. Number of animals and the period of grazing at the selected site will be decided according to the rangeland vegetation production estimated by the rangeland staff at the governorate. The local community around the targeted reserves will participate in the management of the selected sites, choosing the water harvesting location, participation in the regeneration of rangeland and grazing management. NCARE and MoA will train the local community on rangeland management, seed collection and estimation of grazing capacity.

12. **Enhancing livestock nutrition.** This subcomponent seeks to support innovative approaches for the provision of nutritive feedstuff to farmers beyond barley and wheat bran. Comparative analysis of nutrition value and quality impact on Awassi sheep meat of various feedlots will be done. Identification of best feedstuff supporting the registry of GI for Jordanian Awassi Sheep is expected to be provided in coordination between SIGHT & GIAS. Support will be provided in the form of grants to farmer groups or cooperatives. The grants will be announced through the Field Teams, the directorates of the MoA, NCARE and the Jordan Cooperative Corporation offices in the target Governorates, who will assist the project in the selection of groups or cooperatives which are functional, have more than two years of experience and who are financially sound. Identified cooperatives, farmer groups or individual entrepreneurs from the different targeted governorates, will be supported by the FSTs to prepare a business proposal for these projects. The proposal will be evaluated for financing by the PMU with the technical support from external experts and their approval will take according to certain criteria (Appendix 4). The grant by the project will be given for the procurement of goods and services, which the project will oversee. The 30% of the contribution by the grantee can be in terms of investments already made by him or her in the last or new investments in preparation for the activities sponsored by SIGHT.

13. **Policy Analysis.** FAO has long experience in supporting the agriculture sector in Jordan and focuses on building the country's capacities in the field of water use and arable land, fighting pests and animal and plant trans-boundary diseases, fish farming, and support to the host communities' ability to withstand the effects of the Syrian crisis. The project will work with FAO through the recently established National Advisory Group of 7 persons (NAG) from ex agriculture ministers, universities and experts from privet sector. The NAG role is to undertake policy dialogue, analysis and propose engagement paths with the government that will ensure that agricultural sector including small ruminant remains a profitable and sustainable business. PMU, in collaboration with FAO, will provide the policy dialogue platform and the technical assistance to review the existing policy environment and identify opportunities for policy engagement. The findings of the policy analysis will be shared in workshops and other consultative mechanisms, with key stakeholders to assist the Government in achieving some of its strategic objectives.

D. **Specific Arrangements for Component 2: Livelihood Investments and Access to Financial Services**

**Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods**

14. **National and International NGOs as Service Providers.** There are many non-governmental organizations (NGOs) in Jordan working with the low-income and refugees by providing them with small grants or loans of USD 200-500 for entrepreneurial activities (such as CARE International, Jordanian Hashemite Fund for Human Development, The Jordan River Foundations, etc. The Graduation programme under the livelihood packages will be delivered
by 2-3 competitively selected NGOs. Draft Terms of Reference for the NGOs have been developed and provided as part of this appendix. One NGO will be selected to work only with the extreme poor. There are differences in the methodology and the size of the packages for the extreme poor and for the poor. Hiring separate NGOs to deliver the two different packages will be necessary to promote clarity and avoid confusion and conflict in communities. The package for the extreme poor will be up to USD 3,000. This package will include consumption support to protect households against shocks, psychosocial support through life-skills training and intensive coaching (weekly – monthly visits) over a period of 24-36 months. The graduation package for the poor will be up to USD 2,000. This assumes that consumption support is being provided through some other agency or that the household is at a level of poverty where consumption support is not required and a lower level of mentoring and coaching support will be required over a shorter period of time (monthly visits over a period of 6 to 12 months). Both packages also include the value of the productive asset to be transferred. An inclusion of women’s empowerment training will be required for both packages which empowers women in challenging circumstances to envision and create new possibilities for their lives including reflection on career, financial interests, relationships as well as reducing workload through strategizing on how to mobilize other people in the family to help them in house work. In the life skills training and mentoring/coaching, nutrition awareness will be integrated.

15. The organizations selected will be tasked with selecting the intervention area in consultation with the Project Management Unit (PMU) according to pre-determined criteria, mapping and selecting beneficiaries, designing a customized consumption assistance and income-generation package for each beneficiary. The package will specify the level of consumption support, type of training, asset and working capital needed to establish a income generating activity. In accordance with the package designed, beneficiaries will be provided with skills training, life-skills training, financial literacy, business development training and mentoring. Life skills training will include nutrition awareness training and women’s empowerment training. Assets will be purchased by the implementing NGOs and working capital will also be provided as necessary.

16. The selected NGOs will be required to track the beneficiaries over a sustained period of time to ensure their graduation. In the implementation of the subcomponent, implementing NGOs will be required to follow the **CGAP Technical Guide to Graduation Approach**. The NGO will also be required to synergize where possible with existing donor initiatives such as the Arab Women’s Entrepreneurship Fund which is using a private sector led approach to develop women’s home-based businesses in the livestock and handicrafts sector. In addition, the NGO where possible should link beneficiaries with initiatives providing health and education services, social security, etc. For example, NGOs could link up with the initiatives under the Response Interventions for Syrian Refugees and Vulnerable Host Community in Jordan 2014 – 2015 for the nutrition awareness training in terms of drawing on IEC material developed and other resources that might be available. A tentative TORs for the selected service provider is given in Annex 5.2.

17. For the selection of beneficiaries, the PMU will collaborate with local NGOs with experience of working with Syrian refugees and low-income Jordanians to better define the profile of beneficiaries and to ensure the complementarity of the livelihood packages provided under the subcomponent to any prior assistance received by these beneficiaries. PMU will explore the creation of a working group consisting of these NGOs for potential cross-reference of beneficiaries and other information exchange. Collaboration with EBRD for free-of-charge

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business training for entrepreneurial Syrian refugees was explored and will be utilized where appropriate.

18. Expression of Interest in Grants for Graduation into Sustainable Livelihoods will be invited from NGOs. The NGOs expressing interest will be shortlisted and invited to a two–day workshop detailing the Graduation Approach they will be expected to follow when formulating proposals.

19. **Technical assistance for graduation implementation.** For the TA and implementation support, an amount of USD 1.43 million is planned to fund the mapping and selection of beneficiaries for the customized grant-based livelihood packages, skills training and the business development support and mentoring services. These funds will also be used to build the capacity of NGOs implementing the livelihood packages in implementing the Graduation Approach through specialised TA as described above.

20. Once implementing NGOs are identified, PMU will organize training on the fundamentals of the Graduation Approach by an experienced technical assistance provider specialized in graduation selected through competitive bidding. The TA provider will perform/contribute to the following tasks:

   a) Two-day workshop on Graduation Approach for NGOs with an interest in implementing the Grants for Graduation into Sustainable Livelihoods;

   b) Finalizing the TORs/call for proposals and assisting in evaluating the proposals from local NGOs;

   c) Provision of training to local NGOs on the fundamentals of the Graduation Approach (including, potentially, community-based organizations);

   d) Development of the implementation manual for the graduation subcomponent, including criteria and instructions for the selection of subcontractors (such as providers of technical assistance, training, mentoring etc.), unified reporting requirements for implementing NGOs;

   e) Assistance to IFAD project/NGOs selected in beneficiaries selection for the graduation, as well as the development of the graduation plans for beneficiaries at the first stages of implementation;

   f) Development of monitoring and evaluation framework, including the baseline assessment of the beneficiaries included in the program (the baseline survey can be subcontracted);

   g) Follow-up throughout the implementation and provide advice to the project as necessary (both remote support and on-site visits); and

   h) Assist in documenting the implementation progress and lessons learnt.

**Subcomponent 2.2: Lending Facility for Rural Businesses**

34. **Central Bank of Jordan (CBJ),** in addition to a traditional goal of maintaining monetary and financial stability, CBJ has a goal of promoting the sustained economic growth and social development in Jordan. There is a specialized unit within CBJ headed by the head of the Financial Stability Department and comprising representative from the Data Analysis Division, the Studies and Licensing Division, the Legal Department and Investment, and the Foreign Operations Department (in total, 6 staff) that functions as a wholesale lending facility for banks and MFIs. According to CBJ, it has attracted about USD 320 million in funding to the MSME sector in the country in 2015. The wholesale facility of CBJ has been managing funding of MSME development projects of several international institutions. In 2015, CBJ extended funding to banks at 1.75% p.a. for on-lending to MSMEs at market rates (4.25-6%). The advantages of the CBJ facility include:
(a) Professional wholesale facility. This is a dedicated professional unit within CBJ that manages and monitors credit lines of international institutions such as the World Bank and Arab Fund for Social and Economic Development. It is capable of assessing (conducting due diligence) and recruiting a variety of local financial service providers (FSP) – banks and microfinance institutions – to participate in the project. It can also provide reports on FSPs’ financial standing and project performance in line with IFAD’s requirements, including detailed statistics on beneficiaries reached (by gender, age group, region, economic sector etc.).

(b) Works with high quality financial service providers. FSPs working with CBJ under the World Bank project have the CAMEL rating not lower than 3, are fully financially sustainable and have the portfolio at risk over 30 days indicator below 4%. (IFAD’s requirement for portfolio at risk is below 5%). These are professional financial institutions licensed and supervised by CBJ.

(c) Reaches IFAD’s target group. FSPs working with CBJ reach rural areas (over 60% of loans outside Amman), youth (over 80%) and offer Sharia-compliant products that are in high demand especially in rural areas. The World Bank MSME Development Project for Inclusive Growth implemented through CBJ has disbursed over USD 100 million in loans since 2013 to over 10 thousand micro, small and medium-sized enterprises through 12 banks, including Islamic banks (the average loan size is below USD 10,000 – JOD 7,100).

(d) Low interest rates for the end beneficiaries. FSPs working through CBJ provide loans to micro and small enterprises at 4.25% – 5% per annum. There are also interest-free loans available, such as those provided under Sharia principles.

(e) No mandatory collateral. FSPs working through CBJ have reached an agreement with the Jordan Loan Guarantee Corporation to issue guarantees on loans to micro and small businesses.

(f) Ability to enforce repayment. CBJ is the regulator and supervisor of banks and microfinance institutions and can enforce loan repayment.

35. The Line of Credit of SIGHT will be implemented through the CBJ wholesale lending facility. CBJ will be assessing and recruiting a variety of local FSPs – banks and MFIs – to participate in the project. It will also monitor FSPs and provide reports on FSPs’ financial standing and project performance in line with IFAD’s requirements, including detailed statistics on beneficiaries reached (by gender, age group, region, economic sector etc.). CBJ has been selected upon assessing a variety of options, including the provision of credit lines through ACC and DEF. A conclusion has been reached that the CBJ wholesale lending facility fully meets IFAD’s requirements and provides the optimal implementation mechanism. On the other hand, ACC and DEF do not fully meet IFAD’s requirements and neither they are currently interested in using the facility available under the project.

36. IFAD’s requirements to participating financial institutions will be aligned with those of the World Bank and include additional requirements regarding the specific target group of IFAD and SIGHT and related reporting requirements. Specifically, FSPs accessing the Lending Facility for Rural Businesses should demonstrate commitment to working in rural areas, have presence in areas outside the Amman governorate and be committed to serving smallholders and other micro and small rural businesses, particularly women and youth; have a track record of running an MSME lending portfolio, good financial performance, including asset quality, capital adequacy, and profitability; and a strategic focus on MSME development. Annex 5.3 Gives the PFI requirements.

37. IFAD will indicatively allocate USD 1 million for loans for small ruminants’ breed improvement for smallholders, in the amount of up to USD 7,500 per borrower; and USD 1.45 million for
loans for micro businesses in the amounts of up to USD 5,000 per borrower; and USD 1.45 million for loans to small rural businesses in the amounts of USD 10,000 per borrower. As with the number of beneficiaries, these will be indicative types of loan products to steer FSPs towards IFAD’s target group. The facility is designed to encourage commercial banks and MFIs to view loans to the livestock sector and rural entrepreneurs as a viable business opportunity and use their own funds eventually to lend to this sector.

38. **Other training and technical assistance for Access to Finance.** No separate budget will be allocated for training and technical assistance for the subcomponent. Instead, FSPs are expected to benefit from training and TA under the current IFAD’s project – REGEP, where USD 200,000 is provided for this purpose. TA to PFIs includes a variety of activities, such as exposure visits to countries with developed agricultural lending programs, provision of technical assistance in the development of agricultural lending products and mechanisms aimed at mitigating risks related to such products, peer learning events and other relevant assistance.

39. Beneficiaries of Subcomponent 2.2 – recipients of loans for on-farm and off-farm rural micro and small businesses will be eligible for participation in smallholder training activities under Component 1 of the SIGHT project (on topics covering sheep and goat production, animal nutrition and feeding, forage crop production, livestock health and husbandry, herbal and medicinal plants harvested from rangelands or cultivated, small-scale irrigation, and promoting water saving technologies). Those borrowers who are interested will also be eligible to participate in EBRD business advisory training provided under Subcomponent 2.1 covering specialized areas of expertise including strategy, marketing, organization, operations, technology, engineering solutions, quality management, financial management and energy efficiency and environment, as appropriate).

**E. Project Management and Governance**

40. The Ministry of Agriculture (MoA) will be responsible for the implementation of the SIGHT Project. Its day-to-day management and implementation will be performed by a dedicated Project Management Unit (PMU) that will be established within the MOA premises in Amman. It will work closely with the relevant departments in NCARE and MOA, specifically their Animal and Rangelands Resources Departments. Where required it will also coordinate with the other departments of Government such as the Cooperative Corporation in selecting farmer cooperatives in the project Governorates and in overseeing the work under all components of the project.

41. **Project Steering Committee** established at the MoA to guide all agriculture related internationally financed projects will also act as the Steering Committee of the project. It will meet quarterly, and comprise representatives of MOA, NCARE, and selected institutions. The Project Director will be the PSC Secretary. Representatives of implementation partners such as the from Jordan River Foundation and FAO, ICARDA, JOHUD and other NGOs, will be invited by the PSC Secretary to participate in the SC meetings by the Secretariat as needed. The responsibilities of the PSC will include: (i) ensuring the project’s activities are implemented in compliance with the Government’s policies and the terms and conditions of the Loan documents; (ii) approving the AWBPB, (iii) ensuring the project interventions are well coordinated with other development programmes and projects; (iv) broad oversight of project implementation; and (v) guiding project implementation in policy and strategy matters. The PSC Chair will invite any other stakeholder to attend and contribute to PSC deliberations when discussing matters of relevance.

42. **A Technical Coordination Committee** chaired by the Project Manager and composed of the PMU staff and MoA and NCARE Field Managers at the breeding stations and Governorates and District Directorates of MoA and partnering NGOs and PFPs. It will meet monthly in the first year of implementation and quarterly in subsequent years.
43. **Project Management Unit (PMU).** A Project Management Unit (PMU) will be established at the MoA, under the overall supervision of the Secretary General responsible at MoA Headquarters in Amman. The principal functions of the PMU will be to carry out the overall programming and budgeting of Project activities, and take the lead in: (i) project implementation in cooperation with a range of implementing partners, including Participating Financial Institutions and service providers; and (ii) monitoring and documenting progress. It will be responsible for overall management, including coordinating and monitoring of project implementation and: (i) developing the Project Implementation Manual; (ii) developing Annual Work Plans and Budgets (AWPBs) for submission to the PSC; (iii) financial management (managing the project's Designated Account, disbursement, preparation of withdrawal applications); (iv) procurement, contracting and contract management; (v) ensuring the project benefits reach the target group; (vi) monitoring and evaluation, progress reporting on project implementation, and knowledge management; (vii) organising the annual project audit; and (viii) coordination and liaison with the Government and other implementing partners and IFAD.

44. Provisions are made for studies, surveys, technical support and training for the design and operation of the project M&E system. The PMU will ensure the timely establishment of agreements between MoA and NCARE and implementing partners such as NGOs, CBOs, and service providers for business development plans.

45. Specialized staff will be recruited on a competitive basis, or seconded by MoA based on job descriptions for the following positions: (i) Project Director; (ii) Programme Officer, responsible for Component 1 and overall field implementation; (iii) M&E Specialist; (iv) Procurement Specialist; part-time; seconded be from MoA; (v) Financial Management Specialist; part-time; seconded from MoA; and (vi) Gender and Livelihood Specialist, and vii) Driver.

46. The Livelihood and Gender Specialist will be hired to oversee the implementation of Subcomponent 2.1. A sample TORs for the Gender Specialist are given in Annex 5.5. The Monitoring and Evaluation (M&E) Specialist will be tasked to oversee the implementation of Subcomponent 2.2 in cooperation with CBJ. The Job Description of the M&E Specialist is given in Annex 5.4. Short-term technical expertise will be used as and when required from the existing pool of specialists from MOA, NCARE, and the universities such as Jordan University for Science and Technology (JUST). Recruitments from the private sector, as needed, will be based on TORs prepared by the PMU and approved by IFAD. The Directorates of Agriculture in the target Governorates will be involved in supporting the implementation of specific activities based on their geographic locations and the description of support needed as detailed in the PIM. At the field level, MoA and NCARE will assign appropriately qualified staff to the PMU ensuring that relevant competencies are identified and that full-time availability is guaranteed.

47. The SIGHT financial management team, vested with financial and administrative autonomy, will be part of the PMU. This team will be seconded from among MoA staff, subject to IFAD no-objection and based on staff profiles described in the PIM.

48. All contracted staff will be hired through a competitive process, subject to IFAD’s No Objection. The Project Director may be removed only after prior consultation with IFAD. The Project Director will report to Deputy Secretary General responsible for Livestock Affairs and will be responsible for the efficient operation of the PMU and day-to-day project implementation in accordance with the AWPBs.
### Annex 5.1: Implementation Arrangements for Component 1

<table>
<thead>
<tr>
<th>Sub-Component</th>
<th>Key area of activities</th>
<th>Key Tasks</th>
<th>Main Agency Responsible (department/unit)</th>
<th>Supporting Role</th>
<th>Timeline</th>
</tr>
</thead>
</table>
| Sub-component 1.1. Enhancing Public Services | Establishing the ONBP breeding programs for sheep and goats | Survey of livestock producers for high performing Awassi sheep and Shami goats, testing and registering their genotypes and phenotypes, and final selection of animals for purchase | • NCARE (Livestock & rangelands Research Department, Khanasrah and station)  
• MoA (livestock Department and Al-Wallah station)  
• FTs | • GIAS (depending on timing of initiation of SIGHT and GIAS;  
• Universities for DNA testing, | 2nd quarter of Yr 1 |
<p>| | | | | | |
| | | | | | |
| | Establish the PMU | | MoA, IFAD | | 1st quarter of Yr 1 |
| | Establish the FTs (hire the FSTs and assign the GFTs) | | PMU with NCARE and MoA | External technical experts in Jordan and IFAD | 1st quarter of Yr 1 |
| | Identification of potential Breeding Partners (BP) for each of the breeding stations and signing the agreements | | MoA, NCARE (staff of each breeding station) | FTs, GIAS and PMU | 2nd quarter of Yr 1 |
| | Awareness raising on the activities of sheep and goat breeding programme | | FTs, NCARE (livestock &amp; rangelands research department in coordination with extension and Media directorates), MoA (Livestock sector i.e animal production department in coordination with Media directorate) | PMU, Governorate agriculture directorate | 1st and 2nd quarter of Yr 1 |
| Support to the breeding stations | Provision of improved animals to each of Khanasrah Station (Awassi sheep); al-Fuji Station (Awassi sheep); Mushrefa Station (Awassi sheep), Sabha (Awassi sheep, paid by HFDJB) and Al-Wallah (Shami goats) | | NCARE (livestock &amp; rangelands research department), and MoA (Animal production department mainly Sheep and goat breeding division) | PMU, FTs | 2nd quarter of Yr 1 |
| | Preparing of business plan for each breeding station | | Managers of the breeding stations; NCARE (livestock &amp; rangelands research department), and MoA (Animal production department mainly Sheep and goat division) | TA (consultancy) in breeding, PMU | By 2nd quarter of Yr 1 |
| | Training needs assessment (TNA) undertaken | | MoA (Training and development directorate in coordination with Livestock sector), NCARE (Livestock &amp; rangelands research Department) | TA in breeding, PMU | By 2nd quarter of Yr 1 |
| | Training activities to staff of MoA, NCARE, FTs and BPs | | Experts in livestock production and health | TA in breeding, Jordanian | By 3rd – 4th |</p>
<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Responsible Parties</th>
<th>Start and Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>To become Trainers of Trainees (including staff from the Sabha station)</td>
<td>Universities</td>
<td>Q1 Yr 1</td>
</tr>
<tr>
<td>Training activities as per TNA for other staff of the MoA and NCARE (beyond those directly involved in the small ruminants breeding programme)</td>
<td>Universities</td>
<td>Q2 Yr 2 and on-Going</td>
</tr>
<tr>
<td>Training of herders in animal management, health and nutrition</td>
<td>MoA, NCARE, PMU</td>
<td>Q2 Yr 2 and on-Going</td>
</tr>
<tr>
<td>Establish a system for the follow-up with the BPs (by FTs and breeding stations)</td>
<td>TA in breeding stations</td>
<td>By 3rd quarter of Yr 1</td>
</tr>
<tr>
<td>Identify lead farmers (2 per governorate) to undertake on-farm trials comparing the productivity of improved breeds under recommended husbandry practices with local animals under farmers' practices.</td>
<td>TA in breeding stations</td>
<td>By 1st quarter of Yr 2</td>
</tr>
<tr>
<td>Follow-up with lead farmers on on-farm arrangements for the trials and on their implementation - data collection</td>
<td>FTs</td>
<td>By 3rd quarter of Yr 1</td>
</tr>
<tr>
<td>Provide training and extension programs in animal health and nutrition to small herders receiving improved animals from stations or BPs and to recipients of livestock grants/loans (component 2)</td>
<td>FTs, Managers of the breeding stations, PMU (livestock expert)</td>
<td>Starting 1st quarter of Yr 2 and for at least 4 years</td>
</tr>
<tr>
<td>Rehabilitation of training center at Khanasrah station</td>
<td>Call for bids, selection of the implementing service provider and initiation of the work</td>
<td>Starting Yr 1 to be completed by Yr 2</td>
</tr>
<tr>
<td>Improving diagnostic animal health laboratories</td>
<td>Call for bids, selection of the implementing service provider and initiation of the work</td>
<td>Starting 3rd quarter of Yr 1</td>
</tr>
<tr>
<td>Improving the AI capacity of Khanasrah Station</td>
<td>Call for bid to supply the needed equipment</td>
<td>Starting 2nd quarter of Yr 1</td>
</tr>
<tr>
<td>Rehabilitation of MoA Quarantine and Animal Health Certification Facility in Mafraq</td>
<td>Call for bids, selection of the implementing service provider and initiation of the work</td>
<td>Starting Yr 1 to be completed by Yr 2</td>
</tr>
<tr>
<td>Geographical Indication of Jordanian Awassi</td>
<td>Coordination of breeding activities</td>
<td>Starting Yr 1</td>
</tr>
</tbody>
</table>

*Note: TOT = Total Output Targets, FTs = Field Trainers, PMU = Program Management Unit, NCARE = National Centre for Agricultural Research, MoA = Ministry of Agriculture.*
### Appendix 5: Institutional Aspects and Implementation Arrangements

<table>
<thead>
<tr>
<th>Sub-component</th>
<th>Activity Description</th>
<th>Implementing Body</th>
<th>Leading Agency</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sheep (GIAS)</strong></td>
<td><strong>Formulation of a road map for the GI, branding, marketing and identification of the legislation required to support the GI registry.</strong></td>
<td>MoA (GI Division and livestock sector and technical committee of GIAS)</td>
<td>TA universities &amp; consultancies PMU &amp; SIGHT Technical committee HFDJB</td>
<td>Starting 4th quarter Y 1</td>
</tr>
<tr>
<td><strong>Assess the genotype and phenotype of the sheep breed</strong></td>
<td>MoA (GI Division and livestock sector and technical committee of GIAS)</td>
<td>TA universities &amp; consultancies from NCARE</td>
<td>Starting 4th quarter Y 1</td>
<td></td>
</tr>
<tr>
<td><strong>Register the GI for “Awassi – Jo” based on the results of the surveys</strong></td>
<td>MoA (GI Division and livestock sector and technical committee of GIAS)</td>
<td>HFDJB MoA</td>
<td>Based on road map</td>
<td></td>
</tr>
<tr>
<td><strong>Improving Animal Traceability</strong></td>
<td><strong>Purchase of tablets</strong></td>
<td>PMU</td>
<td>MoA</td>
<td>4th quarter of Yr 1</td>
</tr>
<tr>
<td><strong>Upgrading the available software and adaptation to the tablets</strong></td>
<td>MoA (Information Technology department, division of programming and system analysis)</td>
<td>TA from South-South cooperation</td>
<td>4th quarter of Yr 1</td>
<td></td>
</tr>
<tr>
<td><strong>Training of users in the Directorates of Agriculture in the targeted Governorates and at the MoA central server (especially for analysis and M&amp;E reporting)</strong></td>
<td>MoA- Department of programming and system analysis</td>
<td>TA from South-South cooperation</td>
<td>1st quarter of Yr 2</td>
<td></td>
</tr>
<tr>
<td><strong>Pilot investments in Rangeland Reserves</strong></td>
<td><strong>Water harvesting activities: identification of location and initiation of works</strong></td>
<td>MoA (Water harvesting department in coordination with Rangeland department)</td>
<td>PMU/procurement</td>
<td>Starting in 1st quarter of Yr 2</td>
</tr>
<tr>
<td><strong>Regeneration of rangelands activities - inventory of the existing flora and establishment of nurseries of local species</strong></td>
<td>NCARE (Biodiversity Research department and livestock &amp; rangeland research department); MoA(Rangeland department)</td>
<td>Local NGOs and communities , PMU, FTs</td>
<td>Starting in 1st quarter of Yr 2</td>
<td></td>
</tr>
<tr>
<td><strong>Regeneration of rangelands activities – participatory community development plan</strong></td>
<td>MoA (Rangeland department &amp; water harvesting department)/ local NGOs/ local communities</td>
<td>NCARe</td>
<td>Starting 3rd / 4th quarter of Yr 2</td>
<td></td>
</tr>
<tr>
<td><strong>Implementation of rangeland activities</strong></td>
<td>Local communities</td>
<td>NGOs, MoA (rangeland Dept. and NCARE)</td>
<td>End of Yr 2</td>
<td></td>
</tr>
<tr>
<td><strong>Enhancing livestock nutrition</strong></td>
<td><strong>Comparative analysis of nutrition value and quality impact on Awassi sheep meat of various feedlots will be done.</strong></td>
<td>NCARE (livestock &amp; rangelands research department, Khanasreh station) MoA (Animal production department &amp; Animal wealth laboratories department)</td>
<td>SIGHT &amp; GIAS technical committees</td>
<td>3rd quarter Yr 1</td>
</tr>
<tr>
<td><strong>Identification of best feedstuff supporting the registry of GI for Jordanian Awassi Sheep is expected to be provided in coordination</strong></td>
<td>NCARE &amp; MoA,</td>
<td></td>
<td>4th quarter Yr 1</td>
<td></td>
</tr>
</tbody>
</table>
### Institutional Aspects and Implementation Arrangements: Between SIGHT & GIAS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsible Parties</th>
<th>Reference Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness raising on the options of grants and identification of potential beneficiaries</td>
<td>FTs, JCC in the governorates, MoA directorates in the targeted governorates</td>
<td>3rd quarter of YR 1</td>
</tr>
<tr>
<td>Support to the beneficiaries to prepare the business plan</td>
<td>FTs</td>
<td>1st quarter of Yr 2</td>
</tr>
<tr>
<td>Analysis of the capacities of the potential beneficiaries/cooperatives (technical and managerial) and support through required training</td>
<td>JCC in the governorates, MoA directorates in the targeted governorates Specialized NGO or consultant</td>
<td>1st quarter of Yr 2</td>
</tr>
<tr>
<td>Selection and support of the nutrition supported project</td>
<td>PMU selection committee established External specialized experts within the committee</td>
<td></td>
</tr>
</tbody>
</table>
Annex 5.2: Terms of Reference of NGOs for the Graduation Programme

Annex 5.2.1: Terms of Reference
NGOs Implementing the Grants for Graduation into Sustainable Livelihoods for the Extremely Poor

The Non-Governmental Organization (NGO) will implement 1000 graduation packages for the extreme poor in _______________ Governorates over a period of 5 years (with the disbursement of the packages to be done in the first three years). Seventy per cent of these packages will be for Syrians and 30 per cent for Jordanians. Fifty per cent of the packages will be for women and fifty percent for men. Young men (18-30) will be targeted for 25 per cent of the total number of packages for men.

The contracted NGO will: (i) develop a strategic plan for implementing the graduation packages in the target area based on an in-depth learning and understanding of the graduation approach; (ii) identify the villages within governorates based on project's targeting criteria; (iii) undertake a market assessment to identify livelihood opportunities for the target group, access to essential services and partnerships for potentially complementary government social protection; (iv) identify and enroll participants in the graduation programme; (v) develop poverty graduation plans for the participating households; (vi) provide participants with support identified in the poverty graduation plan including consumption support, asset, technical, savings, business and life skills training, intensive mentoring & coaching; (vii) monitor and evaluate participants’ progress; and (viii) provide quarterly reports and final report to the PMU.

Specifically, the NGO will:

(i) Develop an in-depth understanding of the Graduation Approach and lessons learnt as the full graduation approach is going to be implemented for the first time in Jordan. This will involve participating in a training conducted through technical assistance provided through SIGHT on the principles of the approach and lessons learned from implementation and research on the Graduation. The NGO should commit to internalizing the learning of the Graduation Approach by having at least five to six staff members trained, including a minimum of two staff members who will be committed to training other staff of the NGO on the fundamentals of the approach, as necessary.

(ii) Develop a strategic plan for conceptualizing and implementing the Graduation Approach in the target area. This will include the following:

- Developing and piloting targeting instruments and processes for selection of participants based on project's targeting guidelines;
- Identifying graduation criteria with approval of the project PMU;
- Analyzing the services that should be included (beyond the graduation building blocks themselves) given the specific characteristics of the extreme-poor families in the target area;
- Identifying partnerships for services that can support the graduation of households; and
- Develop work plan with resources to be deployed for programme implementation.

(iii) Conduct Market & Livelihood Assessments, including:

- An overview of market access in various value chains (e.g. vitality of local markets, distance, time and cost of travel to closest town, road conditions, availability of public transport) and the suitability of those opportunities based on the skills of the programme participants and the environmental context—weather conditions, availability of water and fodder, etc.—of the geographic area;
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Appendix 5: Institutional Aspects and Implementation Arrangements

- Scan of local private sector income-generating and employment opportunities;
- Overview of local financial access (e.g., levels of access to formal or semi-formal financial services) and healthcare providers (e.g., assessment of healthcare quality and accessibility in terms of physical distance and costs);
- Services (beyond the graduation building blocks themselves) must be included given the specific characteristics of the extreme-poor families in the area, lest participants’ ability to succeed in the program be compromised; and
- Identification of potentially complementary government social protection interventions or other interventions (e.g. by other NGOs).

(iv) Implement graduation packages:
- Training for staff in principles of the Graduation Approach, targeting of beneficiaries and implementation modalities;
- Disseminating information about the project in communities;
- Participatory identification of extreme poor through wealth ranking exercise in communities;
- Screening and selection of participants with household visits using poverty targeting instrument;
- Development of customized graduation plans;
- Provision of consumption support, financial literacy training, life skills training, technical training, asset transfer and other services identified as part of the graduation package; and
- Provision of on-going mentoring/coaching over a period of 24 – 36 months.

(v) Monitoring and Evaluation:
- Progress (Output and Process) Monitoring: At the project level NGO field staff (trainers and supervisors) will establish work plans based on which they will prepare monthly progress reports capturing qualitative and quantitative data required by the PMU. On the basis of these quarterly reports will be submitted;
- Document lessons learnt and case studies: The NGO will document lessons learnt and case studies illustrating both successes and failures; and
- Final report: This will report cumulatively on targets achieved, lessons learnt and the number of participants graduated from poverty against the targeted indicator for graduation of 70%.

(v) Other conditions:
- NGO will hire at least two dedicated staff persons to work on the implementation and act as master trainers and supervisors for the graduation approach;
- NGO’s overhead expenses should not exceed 20% of the direct programme expenses;
- NGOs will hire well-qualified specialized trainers to impart entrepreneurship training to participants approved by the PMU.
Annex 5.2.2: Terms of Reference
NGOs Implementing the Grants for Graduation into Sustainable Livelihoods for the Poor

The Non-Governmental Organization (NGO) will implement 2650 graduation packages for the poor in xx Governorates over a period of 5 years (with the disbursement of the packages to be done in the first four years). Fifty per cent of these packages will be for Syrians and 50% for Jordanians. Fifty per cent of the packages will be for women and fifty percent for men. Young men (18-30) will be targeted for 25% of the total number of packages for men.

The contracted NGO will: (i) develop a strategic plan for implementing the graduation packages in the target area based on an in-depth learning and understanding of the graduation approach; (ii) identify the villages within governorates based on project's targeting criteria; (iii) undertake a market assessment to identify livelihood opportunities for the target group, access to essential services and partnerships for potentially complementary government social protection; (iv) identify and enroll participants in the graduation programme; (v) develop poverty graduation plans for the participating households; (vi) provide participants with support identified in the poverty graduation plan including consumption support, asset, technical, savings, business and life skills training, intensive mentoring & coaching; (vii) monitor and evaluate participants' progress; and (viii) provide quarterly reports and final report to the PMU.

Specifically, the NGO will:

(i) Develop an in-depth understanding of the Graduation Approach and lessons learnt as the full graduation approach is going to be implemented for the first time in Jordan. This will involve participating in a training conducted through technical assistance provided through SIGHT on the principles of the approach and lessons learned from implementation and research on the Graduation. The NGO should commit to internalizing the learning of the Graduation Approach by having at least five to six staff members trained, including a minimum of two staff members who will be committed to training other staff of the NGO on the fundamentals of the approach, as necessary.

(ii) Develop a strategic plan for conceptualizing and implementing the Graduation Approach in the target area. This will include the following:

- Developing and piloting targeting instruments and processes for selection of participants based on project's targeting guidelines;
- Identifying graduation criteria with approval of the project PMU;
- Analyzing the services that should be included (beyond the graduation building blocks themselves) given the specific characteristics of the poor families in the target area;
- Identifying partnerships for services that can support the graduation of households; and
- Develop work plan with resources to be deployed for programme implementation.

(iii) Conduct Market & Livelihood Assessments, including:

- An overview of market access in various value chains (e.g., vitality of local markets, distance, time and cost of travel to closest town, road conditions, availability of public transport) and the suitability of those opportunities based on the skills of the program participants and the environmental context—weather conditions, availability of water and fodder, etc.—of the geographic area;
- Scan of local private sector income-generating and employment opportunities;
- Overview of local financial access (e.g., levels of access to formal or semi-formal financial services) and healthcare providers (e.g., assessment of healthcare quality and accessibility in terms of physical distance and costs);
- Services (beyond the graduation building blocks themselves) must be included given the specific characteristics of the poor families in the area, lest participants' ability to succeed in the program be compromised; and
Identification of potentially complementary government social protection interventions or other interventions (e.g. by other NGOs).

(iv) Implement graduation packages:

- Training for staff in principles of the Graduation Approach, targeting of beneficiaries and implementation modalities;
- Disseminating information about the project in communities;
- Participatory identification of poor through wealth ranking exercise in communities;
- Screening and selection of participants with household visits using poverty targeting instrument;
- Development of customized graduation plans;
- Provision of consumption support, financial literacy training, life skills training, technical training, asset transfer and other services identified as part of the graduation package; and
- Provision of on-going mentoring/coaching over a period of 12 months.

(v) Monitoring and Evaluation:

- **Progress (Output and Process) Monitoring**: At the project level NGO field staff (trainers and supervisors) will establish work plans based on which they will prepare monthly progress reports capturing qualitative and quantitative data required by the PMU. On the basis of these quarterly reports will be submitted;
- **Document lessons learnt and case studies**: The NGO will document lessons learnt and case studies illustrating both successes and failures; and
- **Final report**: This will report cumulatively on targets achieved, lessons learnt and the number of participants graduated from poverty against the targeted indicator for graduation of 70%.

(v) Other conditions:

- NGO will hire at least two dedicated staff persons to work on the implementation and act as master trainers and supervisors for the graduation approach;
- NGO’s overhead expenses should not exceed 20% of the direct programme expenses; and
- NGOs will hire well-qualified specialized trainers to impart entrepreneurship training to participants approved by the PMU.
Annex 5.3: PFI Eligibility Requirements, Terms and Conditions for the Lending Facility for Rural Businesses

1. Participating financial institutions (PFI) in the IFAD Lending Facility for Rural Businesses can be Jordanian banks and MFIs. PFIs accessing funding from the Lending Facility for Rural Businesses must meet the following eligibility criteria:

- Commitment to working in rural areas: PFIs should have presence in areas outside the Amman governorate and be committed to serving smallholders and other micro and small rural businesses, particularly women and youth;
- Past experience: a demonstrated track record of running an MSME lending portfolio for at least three years or, in case of PFIs new to this business, presence of a head of MSME operations with at least three years of relevant experience;
- Overall financial performance: the PFI needs to have an acceptable rating on the CAMEL/ROCA based assessment undertaken by the CBJ. It is proposed that a minimum score of 3 is necessary;
- Loan collections quality: an acceptable level of net non-performing loans (90 days) of no more than 8% or else PFI has a clear action plan to improve collections;
- Capital adequacy: an acceptable level of capital adequacy (minimum 12%);
- Earnings: an acceptable level of earnings quality in the last financial year (minimum return on assets of 0.3%);
- MSME strategic focus: a business plan for the PFIs’ MSME operations for growth; and
- Accounting: availability of audited accounts with no significant unresolved observations from audit reports.

2. Once deemed eligible, banks will be selected for lending under the Project based on an appraisal of their proposals submitted to CBJ. As a central bank, CBJ undertakes detailed on-site and off-site appraisals of commercial banks under its supervision, with the frequency being determined based on the risk profile of the bank. The method used is a CAMEL/ROCA based approach and this will be drawn upon in making an assessment of banks’ proposals under this Project.

3. Proposals will be assessed by the PIU in CBJ based on an assessment of: (i) the quality of financial performance, (ii) management strength of the bank, (iii) the banks’ strategy and plans for MSME portfolio growth in rural areas, and (iv) quality of proposal, including in terms of the “additionality” they entail in financing MSMEs – for example in introducing new products (such as agricultural loans), reaching particularly underserved regions or new MSMEs, innovative use of delivery channels including MFIs (for banks), mobile banking, etc. The following broad framework is proposed in the Table below.

4. It is proposed that proposals that score 3.5 and higher (1 – highest, 5 – lowest) will be considered for funding under the Project. Through such use of defining access to funds based on performance and proposed technical content and management capacity for implementation, the Project will have a strong signalling effect. Adherence to these criteria will be ascertained by CBJ as part of the PFI funding appraisal process.

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5. The following terms and conditions will be reflected in the on-lending financial agreements to be entered into between CBJ and the PFIs:

- All on-lending financial agreements will be subject to prior review by IFAD.
- The PFI will enter into a lending agreement with CBJ.
- Sub-loans will be denominated in JOD, except under circumstances where foreign currency loans are demanded by MSMEs for exporting or re-exporting in accordance with CBJ regulations on foreign currency loans.
- Interest rates from CBJ to partner banks will be set in accordance with market principles. 
- Maturity of sub-loan of up to 15 years, inclusive of a grace period of up to 5 years.
- The partner bank will keep the IFAD-funded MSME sub-loans separate and distinct from the rest of their loan portfolios.
- The PFI will seek to ensure that the Portfolio at Risk over 30 days under the line of credit does not exceed 5% (as of reporting date), and the loan write-off rate does not exceed 2% (per annum).
- Sub-loans to MSMEs will be made in JOD, except in circumstances where foreign currency loans are demanded and made in accordance with CBJ regulations on foreign currency lending.
- Sub-loans to MSMEs will be evaluated using a credit appraisal methodology acceptable to CBJ.
- Sub-loans to MSMEs will ensure acceptable procurement practices in case sub-loans were used for any procurement activities.
- The PFI will charge interest rates adequate to cover its cost of borrowing from CBJ plus a reasonable risk-adjusted spread and profit margin. The interest rate will be positive in real terms.
- The Project will not provide financing to PFIs or SMEs for sub-projects that result in direct economic and social impacts through the: (a) involuntary taking of land resulting in: (i) relocation or loss of shelter, (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.
- The PFI will be responsible for ensuring that MSME sub-borrowers comply with applicable IFAD’s procurement rules and applicable Jordanian environmental legislation/regulations.
- The PFI will be responsible for environmental due diligence to mitigate negative environmental impacts if any are present.
- Remedies and penalties might be applied by CBJ in the event that a PFI fails to comply with requirements.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Overall Institutional Performance</th>
<th>ROCA</th>
<th>Score range (1 best, 5 lowest)</th>
<th>Weight CAMEL</th>
<th>ROCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength of capital</td>
<td>Risk management</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
<td></td>
</tr>
<tr>
<td>Asset quality</td>
<td>Operational controls</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
<td></td>
</tr>
<tr>
<td>Earnings quality</td>
<td>Compliance</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
<td></td>
</tr>
<tr>
<td>Management quality</td>
<td>Asset quality</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td>-</td>
<td>1-5</td>
<td>15</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSME capacity and proposal</th>
<th>Value addition of the proposal (product innovation, under-served areas, women, youth focused, etc.)</th>
<th>1-5</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management capacity for MSME operations</td>
<td>(staff quality, MSME department, performance of SME portfolio, business plan)</td>
<td>1-5</td>
<td>10</td>
</tr>
<tr>
<td>Efficiency in lending (pricing, cost efficiency)</td>
<td>-</td>
<td>1-5</td>
<td>5</td>
</tr>
</tbody>
</table>

Overall: 100
The PFI will retain all documentation relating to sub-loans, provide regular reports to CBJ in agreed formats.
Annex 5.4: Job Description of M&E Specialist

1. Specifically, the following tasks will be included in the M&E Specialist’s job description with respect to Subcomponent 2.2:
   a. Setting-up and maintaining data-bases for the collection of key statistical and performance information on PFIs and end-borrowers from CBJ, in accordance with the project design and IFAD’s Rural Finance Manual;
   b. Preparing periodic reports in accordance with project procedures on the basis of information received from CBJ;
   c. Documenting beneficiaries’ success stories and lessons learnt (at least one per quarter);
   d. Conducting relevant monitoring activities in coordination and cooperation with CBJ, both on PFIs and end borrowers; and
   e. Disseminate information about the SIGHT Project to PFIs, relevant target groups and interested parties.
Annex 5.5 TORs for the Gender & Livelihood Specialist

The Gender and Livelihood Specialist will be responsible for assisting the Project Director in mainstreaming gender in the project, achieving gender impacts as planned, and identifying and managing any gender-related risks and supervising the Grants for Graduation into Sustainable livelihoods and represent SIGHT in his/her area of expertise as requested by his/her supervisor.

- Assist the Project Director in the preparation of the Gender and Targeting Strategy and Action Plan with targets and indicators, timelines based on the strategy outlined in the Project Design Report.
- Familiarize key stakeholders with the Gender and Targeting Strategy of SIGHT through Gender and Targeting Workshop.
- Assist in finalizing targeting criteria with implementing partners and assess accuracy of targeting in Component 1 and 2 through field visits.
- Finalize ToR for NGOs implementing Graduation Packages, develop criteria for evaluation of proposals and assist in evaluation of proposals.
- Plan and supervise technical assistance for the NGOs implementing Graduation Packages.
- Undertake regular field visits to support and monitor mainstreaming of gender and inclusion of youth in Component 1 and 2.
- Support and advise implementing partners of the Graduation packages to refine implementation based on lessons learnt in the field.
- Analyse and identify key issues, lessons learnt and provide recommendations for streamlining targeting, gender mainstreaming, inclusion of youth and implementation of graduation for six-monthly project reports.
- Assist in preparing gender-sensitive TOR for any studies and consultancy/advisory services including training, studies and research undertaken by the project.
- Organize Gender and Targeting Workshop in Y3 of SIGHT for a structured reflection with implementers and stakeholders on targeting, gender mainstreaming, inclusion of youth and implementation of graduation packages with recommendations for ways forward before Mid-Term Review.
- Support Supervision and Implementation Missions, MTRs, Project Completion Report and assist Project Director with compliance with their recommendations on gender, inclusion of youth and graduation packages.
Appendix 6: Planning, M&E and learning and knowledge management

Overview

1. This appendix describes the planning, monitoring, evaluation and knowledge management arrangements for the Small-ruminant Investments and Graduating Households in Transition Project (SIGHT). The Project Design team has taken on board the guidance provided by the updated IFAD’s Results and Impact Management System (RIMS) and the Knowledge Management Framework.

2. IFAD’s commitment to enhance the performance of its rural development interventions in Jordan is driven by the recognition that proper planning, effective performance monitoring and greater transparency in rural development activities in the country generate stronger accountability and ownership, which in turn result in better delivery and performance of Projects.

3. The management and implementation of SIGHT will be based on the recognition that IFAD’s interventions will produce better results when planning, monitoring, reporting and knowledge sharing focus explicitly on key measures of performance that are measured and reported regularly. The design acknowledges that the more transparent the results are, the more likely that IFAD is to learn from successes and failures, and to take corrective actions when needed.

Planning and Budgeting

4. Annual Work Plan and Budget (AWPB) and corresponding Procurement Plans will be the Project’s principal planning instruments. The purpose of the AWPB is to provide SIGHT’s Project Management Unit (PMU) with a timetable for implementation of a set of scheduled activities, together with their respective budgets/inputs. AWPBs are formulated taking into account the Project design report, supervision report recommendations and legal agreements, contract and management agreements of service providers and participating partners.

5. The AWPB is a tool for underlining and specifying implementation priorities, predicting inputs needed and procurement requirements, and most importantly establishing staff work plan both within the PMU, and between implementing agencies. Financial allocations within the AWPB constitute a basis for release of funds and for financial control. A quality AWPB facilitates the preparation of progress reports and the work of the supervision missions.

6. An AWPB is an essential covenant in the legal Financing Agreement; failure to prepare it on a timely basis may lead to delay or suspension of fund disbursement by IFAD. The first AWPB will be prepared, together with the Procurement Plan for the first 18 months of the Project, which is included in the design report, and will be presented for discussion during the start-up workshop for submission to IFAD for no objection. The elaboration of the following AWPBs should be prepared, discussed and approved no later than sixty days before the start of the financial year. To allow full participation of the Project stakeholders, the process of AWPB preparation should start with consultation at the Project’s stakeholders/implementing partners and then be consolidated at the PMU level. Annual Stakeholder Review and Planning Workshops will review the Annual Project Progress Reports and provide input to the Projects’ AWPBs for the succeeding year, thus closing a circle of participatory, demand-driven planning and implementation.

7. The Project will conduct, at its onset, a Start-up Workshop, with the aim of sensitizing and training Project partners, PMU staff and other potential implementing partners. At this workshop, time will be allocated to familiarize all participating partners with the planning and annual work plan process as well as the monitoring and evaluation system. A special session will be included in the start-up workshop on M&E to brief participants about the Project Logical Framework, progress reporting and evaluation arrangements. A session will also be held to
familiarize the participants with IFAD’s new RIMS system, performance based contracting system and key performance indicators regarding the rehabilitation of public breeding stations, provision of advisory services, supporting of micro enterprise development.

**Monitoring and Evaluation**

8. Project monitoring and evaluation will be conducted in accordance with established IFAD procedures and will be provided by the Project team with support from IFAD. The Project Logical Framework provides indicators for Project implementation along with their corresponding means of verification. These will form the basis on which the Project's Monitoring and Evaluation (M&E) system will be established.

9. The M&E system will generate quantitative and qualitative verifiable information on the Project’s performance in a form that will assist the Ministry of Agriculture and the PMU to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action to be taken to correct encountered problem during implementation. The M&E generated information will contribute to facilitating the workflow and quality of the decision-making by providing the means of focusing on implementation problems and ensuring effective communication and co-ordination.

10. The M&E system will be divided in two overall key functions: progress monitoring (Input/Activity/Output) and Outcome/impact monitoring and evaluation. Both are part of a systematic, participatory learning process geared towards ensuring that the Project attains its planned objectives and impact.

11. Progress monitoring is concerned primarily with the monitoring of input delivery, activity implementation and output achievements that can help Project management to continually take timely decisions and self-evaluate. This will be done at all levels; by PMU, implementing partners and by the beneficiaries. The system for monitoring of Project outputs is based on a set of performance indicators associated with the Project's components and sub-components and will mainly concentrate on the immediate, short-term financial and physical results.

12. The Progress monitoring will be based on performance indicators following the Logical Framework. An attempt has been made to ensure the selection of SMART indicators (specific, measurable, attributable, reliable and time bound) and fulfil the RIMS requirements. A Project Output Data Sheet will serve as a real time tracking instrument of the implementation of the Project activities and associated outputs and should be calculated taking into consideration the period that goes from 1 January to 31 December of a given year. The AWPB will ideally be translated into an action plan, where annual target of outputs will be provided for implementation and monitored at all levels associated with each supported Project component/subcomponent.

13. **Outcome and Impact assessments** are concerned with nature, intensity, and sustainability of the changes to the livelihood and the environment of the participating households that is brought about by the direct effects of the achieved outputs, as well as the effectiveness of the targeting and gender mainstreaming strategy. Sustainability of these changes is a necessary factor for positive and lasting impact.

14. The *Outcomes* are the medium-term effects of the outputs produced by the Project. The purpose of monitoring the outcome is to inform Project management of the mid-term results of Project initiatives, identify the most successful implementation experiences as well as the setbacks that have hindered the achievement of expected objectives. The Project outcomes, which also include RIMS indicators, can be tackled starting from the second year or the Project and should be reported to IFAD either on annual or biannual basis, depends on the type of indicator and the methodology used to measure it. Outcome indicators should be collected through conducting of focus groups, in-depth interviews, participatory assessments, studies/surveys in the Project target areas.
15. Impacts are the changes that are logically expected to occur once one or more outcomes have been realized. The development objective is expected to be achieved by the end of Project implementation. The goal sets the macro-level context (development objective) within which the Project fits, and describes the long-term impact that it is expected to contribute towards. The Impact of SIGHT, which includes also RIMS indicators, will be measured through two sets of surveys, namely a Baseline Survey that will be conducted during the first year of the Project and immediately after the Project Start-up Workshop, and; a final Impact Assessment Survey that will precede the Project Completion Mission and will be able to measure the impact of the Project throughout the course of its implementation.

16. Immediately after the formation of the PMU, the SIGHT M&E Officer will develop, with IFAD support, the Management Information System. The system will be designed based on the requirements identified in the Project Logical Framework and in keeping with IFAD RIMS requirements and the guidance provided by the technical divisions of IFAD on M&E. The system will have the capacity to provide gender disaggregated data on all key indicators. The overall responsibility for the M&E activities will lie with the Project Manager, however, she/he will be assisted by the M&E Officer in preparing all progress and monitoring reports.

17. Reporting routine captures data periodically from different sources (stakeholders) about Project interventions, which is consolidated at different levels, processed, analyzed, classified and presented into customized tables that are used for the preparation of different reports namely: (i) monitoring reports (including RIMS), (ii) progress reports, (iii) financial reports; (iv) audit reports; and (v) completion reports. This set of reports constitutes the minimum reporting requirements. The different reports of the M&E will be categorized by period covered, partners producing them as well as by the Project objective hierarchy and the indicator level. Project external monitoring will comprise: annual IFAD supervision; Mid Term Review; ad hoc thematic/diagnostic assessments; yearly audits; and a Project Completion Evaluation/Impact Assessment.

18. The M&E list of indicators that will be employed to monitor Project implementation and assess its impact, including RIMS indicators are described in the Logical Framework. The PMU M&E Officer will be responsible for running the internal M&E and organizing the base line and impact assessment survey. The M&E unit at the PMU should develop formats, questionnaire and other data collection tools that will be used to identify baselines and progress during the course of the Project.

19. Measuring Results and Impact. The SIGHT Project’s Logical Framework will form the basis for the overall results-based M&E system. M&E indicators will be provided in the Project’s Logical Framework. Performance monitoring will concentrate on the financial and physical outputs and the outcomes of Project activities. Performance indicators will be monitored annually for outcomes (starting from the second year) and quarterly for outputs.

20. From the onset of Project operations, the Project will establish the baseline data, though a baseline survey and data collection that correspond to the indicators mentioned in the Logical Framework for each component. The information will be used to compile a base line profile and to assess the socio-economic baseline status of the Project area and to measure the monitoring indicators before the Project commencement. The results of this will be systematically recorded to allow for a comparative assessment during the Project life.

21. Mid-Term Review. A mid-term review will be carried out towards the end of the Project’s third year. The review will cover, among other things: (i) physical and financial progress as measured against AWPNs; (ii) performance and financial management of contracted implementing partners; and (iii) an assessment of the efficacy of technical assistance and capacity building activities.

22. Final Evaluation. An independent Final Evaluation will take place three months prior to the Project completion date, and will focus on the same issues as the mid-term evaluation. The
final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. Accordingly, and Impact Assessment, as an input into the Project Completion Report that should be undertaken by a neutral agency with no previous involvement in Project implementation.

23. During the final year of Project implementation, as part of the preparation of the IFAD-required Project Completion Report/Impact Assessment, the M&E data collected over the Project implementation period will be used as part of a thorough assessment of Project achievements, in terms particularly of changes in the livelihoods of beneficiaries that relate to the implemented Project activities, and the sharing of lessons learned and development experience.

Knowledge Management

24. Given the instrumental role of knowledge management in improving the breeding process of Awasi sheep and sharing good breeding practices from the public owned animal stations to farmers, the compilation and dissemination of Project information, experiences and results on a regular basis will be crucial.

25. The success of interaction among the diverse set of Project stakeholders depends largely on the quantity, quality and timeliness of information flowing among them. This calls for developing suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The Project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, and internet). Innovations and best practices at village level will be documented for the purpose of replication and scaling-up. Farmers with innovations and best practices will be used as mentors for other farmers in order to accelerate the scaling-up and replication of those innovations. KM activities will include sharing Project results and lessons with the government and other donors in the country.

26. The explicit assignment of knowledge management and communication responsibilities will be a shared responsibility. The overall responsibility will belong to the Project Director and the M&E Officer. Service providers will have a key responsibility for sharing lessons learnt during the Project through preparation of special case studies and Learning Notes.

27. This knowledge-sharing process will be supported by a well-focused series of workshops and joint learning events. Where applicable, regional knowledge networking will be supported to build and share approaches, tools, methodologies, technologies and best practices. This will be achieved through the production of special communication materials on certain thematic experience during Project implementation as well as establishing links with local farmers, community based organizations at the governorates’ level and with policy forums at the national level. The Project Steering Committee will have the responsibility for identifying the policy lessons and ensuring that these are communicated appropriately.

28. During the final year of SIGHT implementation, as part of the preparation of the IFAD-required Project Completion Report/Impact Assessment, the M&E data collected over the Project implementation period will be used as part of a thorough assessment of Project achievements. In particular, this shall compare changes in the livelihoods of beneficiaries that relate to the implemented Project activities against the baseline situation.
Appendix 7: Financial Management and Disbursement Arrangements

Inherent risks: country issues, entity risks and project design

1. Overall risk assessment. The country risk is rated as Medium. Transparency International’s Corruption Perception Index ranked Jordan 57th out of 176 countries in 2016 (stable compared to 2015) with a score of 48/100 (53/100 in 2015). Jordan has been receiving assistance towards the improvement of public financial management (PFM) for more than a decade, principally from USAID and the European Union (EU). A new Stand By Agreement has recently (August 2016) been concluded with the IMF on an Extended Fund Facility (EFF), which in addition to committing to further fiscal consolidation provides for continuing improvements in tax administration, reorganization of public debt management and publication of a new debt management strategy, more complete and transparent budget execution reporting, and production of a road map for the introduction of full accruals-based budgetary accounting.

2. The 2017 Public Expenditure and Financial Accountability (PEFA) report concludes that Jordan has generally been able to maintain aggregate fiscal discipline, with effective cash and debt management, and prompt and accurate budget execution reporting. Aggregate expenditure has been kept within budgeted amounts, although there have been fluctuations in the balance between recurrent and capital expenditure. Actual domestic revenue has been fairly close to forecast, and the commitment control module of the Government Financial Management Information System (GFMIS) is working effectively. Payroll control and procurement management are generally satisfactory. Considerable efforts have been made to improve the strategic allocation of resources, through the preparation of strategic plans for service delivery, and the requirement for key performance indicators (KPIs) to be specified for every Department’s expenditure programmes against which actual achievements are measured. Overall the picture is of continuing gradual improvement in PFM despite a very unfavourable external economic environment. Financial management information systems have improved substantially, as has cash management and control.

Financial management risk assessment

3. To determine the project specific control risks, a Financial Management (FM) risk assessment for the SIGHT project and its fiduciary arrangements has been completed as a first step. This assessment concluded that the project financial management arrangements and internal control systems will satisfy IFAD’s minimum requirements to provide accurate and timely information on the progress of project implementation and appropriate accountability for funds. The residual financial management risk is rated as Medium, after the implementation of appropriate risk mitigation measures to ensure accountability of funds such as training of fiduciary staff and support in FM and procurement at start-up and PIM as disbursement conditions.

Proposed financial management and disbursement arrangements

4. Financial management. The SIGHT financial management team will be part of the PMU, which will be fully embedded and located within the MoA, and vested with financial and administrative autonomy. The financial team will be seconded from MoA staff that will be subject to IFAD no-objection on proposed profiles, GoJ will second competent staff to the PMU ensuring that relevant competencies are identified and that full-time availability is guaranteed.

5. Accounting and financial reporting arrangements. The borrower/recipient will open two (2) USD denominated Designated Accounts (DAs) for the IFAD loan and for the IFAD grant from FARMS Facility at Central Bank in order to receive IFAD loan and grant resources. The authorized allocation will be equal to approximately 6 months of project expenditure, from both IFAD loan and grant resources.
6. The MoA will request the opening of two (2) separate bank accounts at the Central Bank. The Central Bank under the MoF maintains the accounts of general budget public institutions and executes the replenishments of project's bank accounts opened at MoA. For that purpose, GoJ has developed a web-based Public Expenditures and Accounting Information System called GFMIS, which includes budget, procurement and contract management, financial monitoring and evaluation modules. The project system will enable the PMU to directly generate financial reports and financial statistics. However, withdrawal applications and statements of expenditure as per IFAD reporting requirements will be prepared manually out of the system until the implementation of the IFAD Client Portal. As condition for the first disbursement, the project will prepare a draft Project Implementation Manual (at a minimum, the fiduciary part), acceptable to IFAD, including financial, accounting, procurement and administrative arrangements for project activities. AWPBs showing all activities planned during the given year, disaggregated by quarter and by financier, should reach IFAD 6 months before the beginning of each fiscal year.

7. All accounting policies and procedures related to the project will be clearly documented in the financial, accounting and administrative procedures manual, which will make reference to the GFMIS manual. The PMU will record eligible expenditures following international accounting standards (cash basis). The PMU will submit quarterly financial reports analysing cumulative disbursements, AWBP execution, treasury position and forecast, implementing partners' financial situation, procurement plan execution and any salient administrative issues.

8. Interim unaudited financial reports for all financing sources (IFRs) will be submitted to IFAD no later than 45 days after the end of each calendar quarter during the project implementation period. A comprehensive, tabulated review of planned activities and their cost will be sufficient. A few pages with analytical comments should be added, listing key achievements, major deviations from the AWBP, implementation issues, resource constraints, and proposed solutions. The Interim Financial Reports should reflect all project activities, financing, and expenditures, including counterpart funds. They could also reflect any substantive contributions in kind such as labour and accommodation.

9. Annual reports shall be prepared. The nature of annual reports is different from that of quarterly reports. In addition to a simple review of implementation progress, this requires analysis by project management. A full picture of project resources, achievements of the past year and since the beginning of the project, as well as annual and cumulative expenditure need to be presented. Analysis is required of successful approaches and outputs, failures and constraints, performance of implementing partners, and whether progress is being made towards achieving project objectives. Such analyses should lead to conclusions about the effectiveness of project strategies, the need for modification of the logical framework, and planning for the following year. The annual reports should also reflect contributions in kind such as salaries and office space.

10. Flow of funds. A chart of the proposed flow of funds arrangements for the project is shown in Figure 7.1 of this Appendix.

11. Counterpart funding. The GoJ contribution to project costs will be in the form of tax exemption, and in kind contributions (essentially office space and utilities, compensation part of salaries for seconded staff and operation and maintenance cost of all upgraded facilities). The project end-beneficiaries will participate in the project costs in the form of in kind contributions.

12. Audit. The annual external audit of the project will be carried out by a private audit firm retained based on competitive selection, in accordance with the International Standards on Auditing and the IFAD Guidelines for Project Audits and based on terms of reference subject to IFAD no objection. The scope of the auditors will include the implementation of the cost sharing grants for Nutrition improvement and under Component 1 and Component 2. Livelihood Investments and Access to Financial Services and eligibility of end beneficiaries. The final audit report and management letter are required to be submitted to IFAD by the Borrower at the latest six months after the end of each fiscal year. In addition to external audit activities, the internal audit unit of MoA will include the review of the transactions of IFAD project as legal mandatory
requirements. The internal Auditor Role in the organization is correctly structured (independent and reporting directly to the Ministerial Cabinet). The transactions of the IFAD financed project will be also reviewed by the permanent team of Jordan Audit Bureau (SAI) based at MoA.

13. **Internal controls.** All internal control mechanisms will be detailed in the financial volume of the PIM, to be prepared before disbursement. IFAD will be requested to provide no-objection on the PIM.

14. **Budgeting.** All project activities for all components and subcomponents will be included in an Annual Work Plan and Budget (AWPB). The AWPB will indicate which budgeted expenditures are intended to be financed from each financing source (IFAD loan, IFAD grant from FARMS Facility, counterpart funds and beneficiaries contributions). Budgets will be in a format that includes the quarterly financing requirements for each financier separately.

15. The approved budget will be incorporated in the GFMIS in accordance with government budgetary charts of accounts.

**Anticorruption and good governance framework**

16. The primary responsibility of detecting fraud and corruption lies with the borrower. However, the project should note that IFAD applies a Zero Tolerance Policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. “Zero Tolerance” means that IFAD will pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. IFAD shall take all possible actions to protect from reprisals individuals who help reveal corrupt practices in its project or grant activities and individuals or entities subject to unfair or malicious allegations. Given IFAD’s Zero Tolerance described above, it is important that the staff and all stakeholders of the project are familiar with IFAD’s as well as national anticorruption policies and whistleblowing procedures. The IFAD anticorruption policy is available on the IFAD website at:


17. The IFAD website also provides instructions on how to report any alleged wrongdoing to the Office of Audit and Oversight (http://www.ifad.org/governance/anticorruption/how.htm).

18. The dissemination of IFAD’s anti-corruption policy amongst project staff and stakeholders, as well as the adoption of IFAD procurement guidelines for SIGHT procurement, should reinforce the use of good practices. In addition, SIGHT will promote good governance through the involvement of municipalities and beneficiaries in (i) the preparation of the annual work plans and budgets, (ii) the procurement process at community level, and (iii) the monitoring and evaluation of project activities.
Figure 7.1. Flow of Funds

IFAD

Ministry of Finance-Central Bank
IFAD Loan and Grant Designated Account
FARMS Facility Grant Designated Account

Ministry of Agriculture
PMU Project accounts at Central Bank

Goods and services providers

Grants implementing partners

Infrastructure Contractors

End Beneficiaries

Central Bank Platform

Professional financial service providers (FSP) – banks and microfinance institutions (MFI)

End Beneficiaries

Cash flows

Flows of information, approvals on implementation
## Matrix 7.2. Project Control Risk – Summary

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Initial FM Risk Rating (H/M/L)</th>
<th>Proposed Risk Mitigating Measures</th>
<th>Residual FM Risk Rating (H/M/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Inherent Risks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Country Level</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TI rating has lowered putting Montenegro at 57/167 countries in 2016.</td>
<td>Medium</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td><strong>1. Entity and Project design</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFAD project will be embedded in MoA and implemented by ministry’s staff.</td>
<td>Medium</td>
<td>PMT staff will be seconded from MoA Staff or selected competitively from the local market.</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IFAD will provide guidance and assistance (particularly in 1st year of implementation) on FM and procurement.</td>
<td></td>
</tr>
<tr>
<td><strong>b) Project Control Risks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organization &amp; Staffing</strong></td>
<td></td>
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</tr>
<tr>
<td>Institutional and organizational aspects due to change on Public entities budget requirements may result in coordination problems, flow of information bottlenecks, reporting delays and disbursement effectiveness.</td>
<td>High</td>
<td>• Finance and Accounting supervisor to be selected.</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Staff ToR to be cleared by IFAD before recruitment/secondment.</td>
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<td></td>
<td></td>
<td>• All Finance Team of PMU will be required to complete FM training on IFAD procedures and provide certification.</td>
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</tr>
<tr>
<td><strong>Budgeting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Timely submission and coordination with the different implementing agencies/partners will be challenging.</td>
<td>High</td>
<td>• Budget preparation and coordination will remain with PMU.</td>
<td>Medium</td>
</tr>
<tr>
<td>• Under spending, absorbing capacities and unrealistic budgets.</td>
<td></td>
<td>• To ensure that timely inputs are received, the Project Coordinator will initiate the process 3 months before the budgets are due.</td>
<td></td>
</tr>
<tr>
<td>• Level of decentralisation</td>
<td></td>
<td>• To ensure a realistic budget, deliverables on previous budgets will be reviewed by the technical and financial teams; significant variances will be investigated regularly and corrective actions will be documented.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Budgets to include all sources of financing separately and to show estimates by quarter.</td>
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<tr>
<td></td>
<td></td>
<td>• Interim financial reports showing progress against budgets to be submitted to IFAD quarterly; IFAD will provide the necessary support remotely and during field visits.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix 7: Financial management and disbursement arrangements

<table>
<thead>
<tr>
<th>Section</th>
<th>Risk</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Funds Flow &amp; Disbursements</strong></td>
<td>High</td>
<td>IFAD funds flow through Central Bank through MoF System monitored by the State Treasury.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implementation delays due to lack of knowledge of IFAD procedures and limited abilities to align forecast liquidity needs with designed categories.</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Budgeting issues will be mitigated, thereby facilitating the forecast of funds utilization.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clearly detailed fund flow arrangements and continuous follow-up of the same within the first year of implementation to ensure any needed corrections will be made to mitigate risk of liquidity problems and ensure smooth flow of funds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial procedures manual will be a condition to disbursement and knowledge of the same will be mandatory for all staff involved in finance.</td>
</tr>
<tr>
<td><strong>2. Accounting Systems, Policies &amp; Procedures</strong></td>
<td>Medium</td>
<td>MOF Web based Public Expenditures system is mandatory for executing any payment from national budget including international funded projects. Manuals for the system are also available and updated whenever system is upgraded.</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Categories of expenditures designed in GFMIS.</td>
</tr>
<tr>
<td><strong>3. Reporting &amp; Monitoring</strong></td>
<td>High</td>
<td>The accounting system should be designed to implement donor-funded projects.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accounting is on cash basis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adequate procedures are in place for accounting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large volume of reports requested on quarterly basis by the State Treasury.</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Good designed and implemented GFMIS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Training on IFAD specific requirements on accounting and financial system (Budget and Financial Reporting Module) will be provided for all finance staff involved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reporting and monitoring requirement will be detailed within PIM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data recorded in Project accounting system to be reconciled on monthly basis with GFMIS and ensure timely correction for any identified discrepancies.</td>
</tr>
<tr>
<td><strong>4. Internal Audit</strong></td>
<td>High</td>
<td>Periodic reporting of internal control weaknesses to MoA internal audit.</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Internal controllers of MoA are part of the ex-ante review of expenditures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal Audit will be carried periodically by SAI.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOR of external auditors to be extended to include review of internal controls and field visits.</td>
</tr>
<tr>
<td><strong>5. Auditing</strong></td>
<td>High</td>
<td>The Project will appoint private audit firm for external audit.</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>External auditors scope should be extended to cover all contributions in the project including those in kind.</td>
</tr>
</tbody>
</table>

| Project Fiduciary Risk at design:                                      | Medium | Medium |

* H=High, M=Medium, L=Low
Appendix 8: Procurement

A. Overview of Jordan’s Public Procurement System

1. Public procurement system in Jordan is currently regulated by different acts. The General Supplies By-law No. 32 (1993) and amendments that apply to all general supplies of Central Government, the Joint Procurement Law of Medicines and Medical Supplies (2002) for the purchase of medications, and the Public Works By-law No. 71 of 1986 and its amendments for major construction projects. Consultancy services are governed by the Works Regulation.

2. The core of the central government procurement in Jordan is distributed between three central procuring entities. They are the General Tender Directorate (GTD) of the Ministry of Works for construction procurement, the General Supply Department (GSD) of the Ministry of Finance for purchase of goods and the Joint Procurement Directorate (JPD) for purchase of medicine; which is administratively attached to the Prime Minister’s Office. There is no central oversight unit and no entity in charge of the common regulatory framework. Each procuring agency operates under the auspices of its own regulatory framework. They all maintain records of their own procurement activities with respect to contract awards, including the items procured, the contract value, and the name of the successful tenderer.

3. A recent comparative study of Public Finance Management (PFM) in MENA countries finds that Jordan is the top overall performer, together with Morocco. Nevertheless, public access to procurement information lacks information on government procurement plans and data on the resolution of complaints. Procurement databases are maintained for most procurements, and 75% or more of procurements are covered. Competitive procurement is the default method for both the GSD and the GTD. The situation is rather different with the JPD where suppliers of drugs and medical supplies need to prequalify by registering with the Jordan Food and Drug Administration (JFDA) before they can be eligible to be awarded Government contracts. Bids are invited from registered suppliers and the cheapest offer is selected. The statistics for 2015 show that over 92% of GTD contacts and 98% of GSD contracts were awarded using competitive methods. The weakest aspect of procurement is the absence of an independent procurement complaints mechanism.

B. MoA’s Procurement Capacity Assessment

4. During the design mission, the capacity of the Implementing Agency - the Ministry of Agriculture (MoA) was assessed and MoA was judged to be capable of carrying out and managing the procurement under the current financing, provided that the following recommended actions are taken. At the MoA, procurement is handled by the Tenders & Procurement Department (TPD) under the Financial & Administrative sector and through three permanent committees. TPD is constituted of 4 Units: (1) Goods Tenders Unit, (2) Works Tenders Unit, (3) Procurement Unit and (4) Audit and Procurement Monitoring Unit. The Department has 10 staff headed by a Director. The procurement system is well defined at the TPD and operates in a transparent environment where staff is familiar with and comply with the requirements of the regulations.

C. Risk Mitigation Measures

5. The Procurement Capacity Assessment identified the overall procurement implementation risk and proposed the following mitigation measures: (i) ensuring proper coordination between the Project Management Unit (PMU) and the TPD, especially with respect to procurement planning; (ii) using the procurement plan as a monitoring tool for processing timely activities and not only as a reporting tool; (iii) preparing a procurement section in the Project Implementation Manual (PIM) to integrate procurement processing but also forms and standardized documents; (iv) systematizing record keeping, and enhancing electronic archiving of procurement processing; (v) enhancing capacity for appropriate support (staff, training, tools) to properly

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110 The Supplies Act, the Joint Procurement Law of Medicines and Medical Supplies 2002 and the Government Works By-Law respectively.
prepare the project procurement by linking project objectives, the Annual Work Plan and Budget (AWPB) and procurement plan; (vi) agreeing on a training program (internal/external) to be implemented over the life of the project that is both relevant and practical; (vii) National Competitive Bidding (NCB) provisions in the IFAD’s Procurement Guidelines shall be observed; (viii) enhancing capacity in terms of technical specifications drafting, (ix) establishing/improving and implementing complaint management system; (x) developing suitable corrections to planning, cost estimates, lack of proper designs, technical specifications, etc.; and (xi) including appropriate coverage of procurement aspects to meet project requirements in the audit TOR, that will require conducting performance audits.

D. Procurement Methods and Arrangements

6. Goods, Works and Services. The procurement of goods, works and services to be financed out of the proceeds of IFAD financing will be carried out by the PMU in accordance with IFAD’s Procurement Guidelines and by observing the following specific principles:

- Procurement will be carried out in accordance with Financing Agreement and any duly agreed amendments thereto;
- Procurement will be conducted within the Project implementation period, except as provided under Article 4.10(a)(ii) of IFAD General Conditions;
- The cost of the procurement is not to exceed the availability of duly allocated funds as per the Financing Agreement;
- Procurement is to be consistent with the duly approved annual work plan and budget (AWP/B) including a procurement plan (for the first time, the procurement plan will cover the first 18 months of the project implementation period); and
- Procurement is to result in the best value for money.

7. Where appropriate, the procurement of goods, works and services to be financed out of the proceeds of Government financing will be carried out in accordance with Government guidelines.

8. All goods, works and services procured will be exempt from duties and taxes.

9. The following thresholds111 and procedures will apply:

- **Goods.** Contracts for procurement of goods costing USD 1,000,000 or more will be awarded based on International Competitive Bidding; those costing USD 100,000 or more but less than USD 1,000,000 will be based on National Competitive Bidding; while those costing less than USD 100,000 will be based on National Shopping/Request for Quotations (RFQ).

- **Works.** The procurement of works estimated to cost more than USD 200,000 and less than USD 10 million will be carried out under National Competitive Bidding; International Competitive Bidding will be applied for contracts estimated to cost USD 10 million and above. National Shopping/Request for Quotations (RFQ) will be applied for contracts with values estimated at USD 200,000 or below, as long as they are clearly identified in the relevant AWPB and procurement plan.

- **Services.** MoA is expected to conduct (i) Quality and Cost Based Selections (QCBS); (ii) Least-Cost Selection (LCS); (iii) Selection Based on the Consultants’ Qualifications (CQS); (iv) Single Source Selection (SSS); and (v) Selection of Individual Consultants.

---

10. **Prior Review.** The award of any contract estimated to cost more than USD 200 000 equivalent for Works and Goods, and more than USD 100 000 equivalent for services, will be subject to prior review by IFAD in accordance with the provisions of the Procurement Guidelines. In addition a requirement for IFAD Prior Review will be applied in the following circumstances:

- Bidding documents and award of any contract for 1st two (2) tenders under each method;
- Specifications, Statement of Requirements and Terms of Reference for goods, works and consulting services where pre-approved standard bidding documents/RFPs/RFQs are used;
- The solicitation and award of all consulting services for individuals;
- All foreign contracted training; and
- Any direct contracting or single-source selection.

11. **Procedure.** MoA will be responsible and accountable for executing procurement in compliance with the stipulated procedures of IFAD and Government. Procurement methods and prior review requirements for each procurement item will be clearly identified in annual procurement plans to be submitted to the Project Steering Committee (PSC) and IFAD together with the AWPBs.

12. **Contracting.** Contracts for civil works will be based on unit costs and bills of quantities, while contracts for services will be based on achievement of deliverables and compliance with milestones rather than based on inputs, to the extent feasible. Considerable importance will be placed by IFAD supervision missions on monitoring efficiency, effectiveness and compliance of contract management by the PMU.

13. **Microfinance Institutions.** The subcomponent 2.2: Lending Facility for Rural Businesses will be contracted through the Central Bank of Jordan to professional financial service providers (FSP) – banks and microfinance institutions (MFI) which will provide uncollateralized micro loans to rural residents, especially to women and youth. FSPs will be selected based on agreed procedures to be detailed in a manual of procedures.

**E. Procurement Methods and Arrangements**

14. **Procurement Planning.** The procurement plan for the life of the project is developed to cover all project activities. Updates of the plan shall be reviewed by IFAD at least twice a year or as seen necessary. The summary of the first “18 month procurement plan” is the following:

**Goods and Works and Non-consulting services**

15. **Procurement Method and Prior Review Thresholds:** Procurement methods and procurement decisions subject to Prior Review by IFAD as stated in Appendix 8 to the Project Design Report:

**Table 8.1: Procurement methods and Prior review thresholds**

<table>
<thead>
<tr>
<th>Procurement Method</th>
<th>Method Threshold</th>
<th>Prior Review Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ICB</td>
<td>≥ $1,000,000 - goods&lt;br&gt;≥ $10,000,000 - works</td>
<td>≥ $200,000 - goods&lt;br&gt;≥ $200,000 – works&lt;br&gt;and 1st two (2) tenders regardless of the contract amount.</td>
</tr>
<tr>
<td>2. NCB</td>
<td>&lt; $ 1,000,000 – goods&lt;br&gt;&lt; $ 10,000,000 – works</td>
<td>≥ $200,000 - goods&lt;br&gt;≥ $200,000 – works&lt;br&gt;and 1st two (2) tenders regardless of the contract amount.</td>
</tr>
<tr>
<td>3. Shopping/RFQ</td>
<td>&lt; $ 100,000 – goods&lt;br&gt;&lt; $ 200,000 – works</td>
<td>1st two (2) tenders regardless of the contract amount.</td>
</tr>
<tr>
<td>4. Direct Contracting</td>
<td></td>
<td>All</td>
</tr>
</tbody>
</table>
### Table 8.2: Procurement Items with Methods and Time Schedule

<table>
<thead>
<tr>
<th>No.</th>
<th>Contract (Description)</th>
<th>Total Estimated Cost ($)</th>
<th>Procurement Category</th>
<th>No of Contracts</th>
<th>Procurement Method</th>
<th>Review by IFAD (Prior/Post)</th>
<th>Expected Bid-Opening Date</th>
<th>Expected Contract Signing</th>
<th>Expected Contract Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rehabilitation of stations and training centre</td>
<td>546,000.00</td>
<td>Works</td>
<td>Multiple</td>
<td>NCB</td>
<td>Prior</td>
<td>Oct 2018</td>
<td>Jan 2019</td>
<td>Jun 2019</td>
</tr>
<tr>
<td>2</td>
<td>Procurement of small ruminants</td>
<td>728,000.00</td>
<td>Goods</td>
<td>Multiple</td>
<td>NCB</td>
<td>Prior</td>
<td>Apr 2018</td>
<td>Aug 2018</td>
<td>Dec 2019</td>
</tr>
<tr>
<td>3</td>
<td>Restoration of 3 Reserves</td>
<td>114,000.00</td>
<td>Works</td>
<td>Multiple</td>
<td>Shopping/RfQ</td>
<td>Prior</td>
<td>Mar 2019</td>
<td>Jul 2019</td>
<td>Dec 2020</td>
</tr>
<tr>
<td>4</td>
<td>Halir &amp; wells construction</td>
<td>169,000.00</td>
<td>Works</td>
<td>Multiple</td>
<td>Shopping/RfQ</td>
<td>Prior</td>
<td>Mar 2019</td>
<td>Jul 2019</td>
<td>Dec 2020</td>
</tr>
<tr>
<td>5</td>
<td>Procurement of equipment for improvement of animals traceability</td>
<td>38,000.00</td>
<td>Goods</td>
<td>Multiple</td>
<td>Shopping/RfQ</td>
<td>Prior</td>
<td>Jun 2018</td>
<td>Aug 2018</td>
<td>Dec 2019</td>
</tr>
<tr>
<td>5</td>
<td>Procurement of Equipment to upgrade Diagnostic laboratories and artificial insemination labs and Artificial Insemination Laboratories (Diagnostic Laboratories) and Artificial Insemination Laboratories, and Quarantine and Certification Facility</td>
<td>258,000.00</td>
<td>Goods</td>
<td>1</td>
<td>NCB</td>
<td>Prior</td>
<td>Jan 2019</td>
<td>Apr 2019</td>
<td>Dec 2019</td>
</tr>
<tr>
<td>6</td>
<td>Office Furniture</td>
<td>15,000.00</td>
<td>Goods</td>
<td>1</td>
<td>Shopping/RfQ</td>
<td>Post</td>
<td>Mar 2018</td>
<td>Apr 2018</td>
<td>Jun 2018</td>
</tr>
<tr>
<td>7</td>
<td>Computers, Mobile phones, camera, printers, scanners, data-show</td>
<td>10,800.00</td>
<td>Goods</td>
<td>1</td>
<td>Shopping/RfQ</td>
<td>Prior</td>
<td>Mar 2018</td>
<td>Apr 2018</td>
<td>Jun 2018</td>
</tr>
<tr>
<td>7</td>
<td>Vehicle</td>
<td>69,785.00</td>
<td>Goods</td>
<td>1</td>
<td>Shopping/RfQ</td>
<td>Prior</td>
<td>Mar 2018</td>
<td>Apr 2018</td>
<td>Jun 2018</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td><strong>Selection of Consultants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16. Prior Review Threshold. Selection Decisions subject to Prior Review by IFAD as stated in Appendix 8 to the Project Design Report:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 8.3: Selection of Consultants

<table>
<thead>
<tr>
<th>Selection Method</th>
<th>Prior Review Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Competitive Methods (Firms)</td>
<td>≥ USD 100,000</td>
</tr>
<tr>
<td>2. Single Source (Firms)</td>
<td>All</td>
</tr>
<tr>
<td>3. Individual Consultant (IC)</td>
<td>≥ USD 50,000</td>
</tr>
<tr>
<td>Single Source (IC)</td>
<td>All</td>
</tr>
</tbody>
</table>
### Table 8.4: Consultancy Assignments with Selection Methods and Time Schedule

<table>
<thead>
<tr>
<th>No</th>
<th>Description of Assignment</th>
<th>Total Estimated Cost (USD)</th>
<th>Number of Contracts</th>
<th>Selection Method</th>
<th>Review by Bank (Prior / Post)</th>
<th>Expected Proposals Submission Date</th>
<th>Expected Contract Signing Date</th>
<th>Expected Contract Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baseline survey</td>
<td>46,000</td>
<td>1</td>
<td>CQS</td>
<td>Prior</td>
<td>Mar 2018</td>
<td>May 2018</td>
<td>Jul 2018</td>
</tr>
<tr>
<td>2</td>
<td>Impact survey</td>
<td>50,000</td>
<td>1</td>
<td>CQS</td>
<td>Post</td>
<td>Mar 2023</td>
<td>Jun 2023</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>3</td>
<td>M&amp;E Studies</td>
<td>40,000</td>
<td>multiple</td>
<td>IC</td>
<td>Prior</td>
<td>Mar 2018</td>
<td>May 2018</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>4</td>
<td>Auditing</td>
<td>80,000</td>
<td>2</td>
<td>LCS</td>
<td>Prior</td>
<td>Mar 2018</td>
<td>May 2018</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>5</td>
<td>Market assessments</td>
<td>60,000</td>
<td>multiple</td>
<td>IC</td>
<td>Post</td>
<td>Mar 2018</td>
<td>May 2018</td>
<td>Dec 2019</td>
</tr>
<tr>
<td>6</td>
<td>Short Term TA</td>
<td>80,000</td>
<td>Multiple</td>
<td>IC</td>
<td>Post</td>
<td>Throughout the life of the project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Implementation support and TA to Grants for graduation into sustainable livelihoods</td>
<td>1,142,000</td>
<td>Multiple</td>
<td>IC/CQS</td>
<td>Prior/Post</td>
<td>Throughout the life of the project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>TA/Studies on Geographic indication</td>
<td>102,000</td>
<td>Multiple</td>
<td>IC/CQS</td>
<td>Prior/Post</td>
<td>Throughout the life of the project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Project Director</td>
<td>344,000</td>
<td>Multiple</td>
<td>IC</td>
<td>Prior</td>
<td>Feb 2018</td>
<td>Mar 2018</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>10</td>
<td>Program Officer</td>
<td>161,000</td>
<td>Multiple</td>
<td>IC</td>
<td>Prior</td>
<td>Feb 2018</td>
<td>Mar 2018</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>11</td>
<td>M&amp;E Specialist</td>
<td>199,000</td>
<td>Multiple</td>
<td>IC</td>
<td>Prior</td>
<td>Feb 2018</td>
<td>Mar 2018</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>12</td>
<td>Gender and Livelihood Specialist</td>
<td>199,000</td>
<td>Multiple</td>
<td>IC</td>
<td>Prior</td>
<td>Feb 2018</td>
<td>Mar 2018</td>
<td>Dec 2023</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>2,503,000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 9: Project cost and financing

1. This Appendix covers the project costs and financing plan, while it also describes the assumptions underlying them and sets out the basis and details of the estimated project costs.

2. **Main Assumptions.** The Project is financed over a six-year period, and it is assumed to start in the second semester of 2018. Costs have been estimated on the basis of prices prevailing during project design in March 2017.

3. **Physical and price contingencies.** Physical contingency of 5% has been applied to civil works while price contingencies have been applied on all costs, with the exception of credit lines and matching grants.

4. **Inflation.** Following a period of deflation in 2015-2016, inflation is expected to rise to an annual average of 2% between 2018 and 2023. The main expected factors driving inflation include strengthening domestic demand growth, an increase in rental prices (reflecting the impact of the refugee influx on housing demand) and further planned increases in electricity and water tariffs.\(^{112}\) For the purpose of this analysis, annual local inflation rates have been set at 2% throughout the six project years. For the foreign component, an average inflation rate of 1.8% has been provisioned.

5. **Exchange rate.** The Central Bank of Jordan (CBJ) is expected to remain committed to the maintenance of the dollar peg in order to support its monetary policy. The exchange rate used in this analysis is therefore fixed at JD 1 : USD 1.\(^{113}\)

6. **Taxes and duties.** The Government co-financing of the project will be in form of waiving of all taxes and duties on goods and services procured under the project. The rates and amounts of the taxes and duties in the project’s costs presented in this section are indicated to estimate the Government in-kind and revenue foregone and estimate the total project cost. The items to be imported for the project attract import and excise duties of varying proportions, and a value-added tax (VAT) of 16% is levied on all imported goods.

7. **Project Costs.** The total project costs including physical and price contingencies are estimated at USD 23.99 million over six years implementation period. Project costs by components are summarized in Table 1, while a complete set of project summary tables and detailed costs tables are presented in Attachments 1 and 2 of this Appendix.

8. **Project costs by components.** Project investments are organized into three major components: (i) investments in farmer services (35.1% of the total costs); (ii) livelihood investments and access to financial services (56.8% of the total costs); (iii) project management (8.1% of the costs). A summary breakdown of the project costs by components is shown in Table 9.1.

---

\(^{112}\) The Economist Intelligence Unit. Country Report, February 2017

9. Project financing. The total project cost of USD 23.99 million will be financed by an IFAD loan of USD 8.4 million, an IFAD grant of USD 0.5 million. The Facility for Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) will co-finance the project with a grant of around USD 3.9 million. There is a financing gap of USD 6.5 million, which IFAD will try to address by mobilizing additional grant resources from co-financiers through FARMS. The Swiss Development Cooperation has pledged an amount of USD 2.5 million as a contribution to this financing gap – IFAD will receive confirmation by mid-July. The Government in-kind contribution will be approximately USD 4.69 million. There is a financing gap of USD 4 million, which IFAD will try to mobilize through additional grant co-financiers through FARMS. The financing gap will not impact the core activities of the project as the financing has been structured in such a manner that if additional financing can be mobilised it will be used to provide support to 2,600 women and youth from among the Syrian Refugee families and host communities to enable them to graduate out of poverty through concentrated support. The proposed financing plan is summarized in Table 9.2 below.

Table 9.2: Project financing (USD 000)

<table>
<thead>
<tr>
<th></th>
<th>The Government</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>A. Investment in formal services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Enhancing public services</td>
<td>2,183</td>
<td>48.8</td>
<td>2,181</td>
<td>48.7</td>
<td>-</td>
</tr>
<tr>
<td>2. Improving community and private services</td>
<td>1,059</td>
<td>24.9</td>
<td>1,442</td>
<td>31.1</td>
<td>164</td>
</tr>
<tr>
<td>3. Support to policy engagement</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>70</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4,252</td>
<td>93.6</td>
<td>3,523</td>
<td>78.9</td>
<td>164</td>
</tr>
<tr>
<td>B. Livelihood investments and access to financial services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grants for graduation into sustainable livelihoods</td>
<td>229</td>
<td>2.4</td>
<td>-</td>
<td>-</td>
<td>9,512</td>
</tr>
<tr>
<td>2. Lending facility for rural businesses</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal</td>
<td>229</td>
<td>5.3</td>
<td>9,512</td>
<td>20.7</td>
<td>-</td>
</tr>
<tr>
<td>C. Project management</td>
<td>340</td>
<td>7.7</td>
<td>507</td>
<td>11.6</td>
<td>275</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>4,890</td>
<td>100.0</td>
<td>9,442</td>
<td>100.0</td>
<td>9,741</td>
</tr>
</tbody>
</table>

10. The IFAD loan will finance: (i) sub-component 1.1 “Enhancing public sector services” (USD 2.18 million), (ii) sub-component 1.2 “Improving community and private services” (USD 1.44 million), (iii) sub-component 2.2 “Lending facility for rural business” (USD 3.9 million), and (v) project management (USD 0.88 million).

11. The IFAD grant will mostly finance: (i) technical assistance and trainings in sub-component 1.1 and in sub-component 1.2 (USD 0.43 million), and (ii) support to policy engagement in sub-component 1.3 (USD 0.07 million).
12. **FARMS funds** will mostly finance income generating grants and technical assistance in component 2 (USD 9.5 million\(^{114}\)). USD 0.18 million will co-finance farmer support teams in sub-component 1.2, and USD 0.72 will contribute to the project management cost.

13. The Government in-kind contribution will be for the exemptions from taxes and duties on all project inputs that involve funding from the IFAD loan, IFAD Grant, FARMS. The estimate of taxes and duties was based on the rates prevailing at the time of the design. In conformity with the principle that no taxes or duties will be financed out of the proceeds of the IFAD loan/grant, any future changes in tax legislation will apply to the project.

14. The Government in-kind contribution will also include: (i) rehabilitated stations and training center’s operating and maintenance costs\(^{115}\); (ii) government field teams’ salaries; and (iii) the provision of an office space for the PMU and seconded procurement and financial management specialists\(^{116}\).

15. **Expenditure and disbursement accounts.** The Project Management Unit will manage and coordinate the flow of funds and the expenditures incurred on account of the project activities. Financial management and procurement procedures are described in Appendices 7 and 8. A summary of the total costs by expenditure accounts by year is shown in Table 9.3 and a summary of the total costs by disbursement accounts and financier is presented in Table 9.4.

### Table 9.3: Expenditure accounts by financier

<table>
<thead>
<tr>
<th></th>
<th>The Government</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>I. Investment Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Consultancies /a</td>
<td>365</td>
<td>11.3</td>
<td>1,237</td>
<td>38.4</td>
<td>1,458</td>
</tr>
<tr>
<td>B. Equipment and Material</td>
<td>2,140</td>
<td>52.1</td>
<td>1,969</td>
<td>47.9</td>
<td>-</td>
</tr>
<tr>
<td>C. Goods and Services</td>
<td>52</td>
<td>10.3</td>
<td>453</td>
<td>89.7</td>
<td>-</td>
</tr>
<tr>
<td>D. Grant &amp; Subsidies</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,300</td>
</tr>
<tr>
<td>E. Trainings and workshop</td>
<td>82</td>
<td>16.0</td>
<td>93</td>
<td>18.2</td>
<td>3</td>
</tr>
<tr>
<td>F. Works</td>
<td>27</td>
<td>16.0</td>
<td>142</td>
<td>84.0</td>
<td>-</td>
</tr>
<tr>
<td>G. Credit, guarantee fund /b</td>
<td>-</td>
<td>-</td>
<td>3,900</td>
<td>100.0</td>
<td>-</td>
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<tr>
<td>Total Investment Costs</td>
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<td>12.9</td>
<td>7,795</td>
<td>37.6</td>
<td>9,761</td>
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<td>II. Recurrent Costs</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salaries &amp; Allowances</td>
<td>1,349</td>
<td>62.1</td>
<td>577</td>
<td>18.4</td>
<td>610</td>
</tr>
<tr>
<td>B. Operating Costs</td>
<td>75</td>
<td>56.8</td>
<td>28</td>
<td>21.6</td>
<td>28</td>
</tr>
<tr>
<td>Total Recurrent Costs</td>
<td>2,023</td>
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<td>606</td>
<td>18.5</td>
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<td>Total PROJECT COSTS</td>
<td>4,690</td>
<td>19.5</td>
<td>8,400</td>
<td>35.0</td>
<td>10,400</td>
</tr>
</tbody>
</table>

\(^{114}\) This amount includes the financing gap.

\(^{115}\) Including animals’ feeding, veterinary services and any other operating cost.

\(^{116}\) Part-time government staff.
### Table 9.4: Disbursement accounts by financier

<table>
<thead>
<tr>
<th>The Government</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>1. Consultancies_DA</td>
<td>365</td>
<td>11.3</td>
<td>1,237</td>
<td>38.4</td>
</tr>
<tr>
<td>2. Equipment and Material_DA</td>
<td>2,140</td>
<td>52.1</td>
<td>1,969</td>
<td>47.9</td>
</tr>
<tr>
<td>3. Goods and Services_DA</td>
<td>52</td>
<td>10.3</td>
<td>453</td>
<td>89.7</td>
</tr>
<tr>
<td>4. GRANT_DA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5. Workshops_DA</td>
<td>82</td>
<td>16.0</td>
<td>93</td>
<td>18.2</td>
</tr>
<tr>
<td>6. Works_DA</td>
<td>27</td>
<td>16.0</td>
<td>142</td>
<td>84.0</td>
</tr>
<tr>
<td>7. Salaries and Allowances_DA</td>
<td>1,949</td>
<td>62.1</td>
<td>577</td>
<td>18.4</td>
</tr>
<tr>
<td>8. Operating Costs_DA</td>
<td>75</td>
<td>56.8</td>
<td>28</td>
<td>21.6</td>
</tr>
<tr>
<td>9. Credit, Guarantee Funds_DA</td>
<td>-</td>
<td>-</td>
<td>3,900</td>
<td>100.0</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>4,690</td>
<td>19.5</td>
<td>8,400</td>
<td>35.0</td>
</tr>
</tbody>
</table>
Attachment 9.1: Summary cost and financing tables (USD)

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Components by Financier</td>
</tr>
<tr>
<td>2</td>
<td>Expenditure Accounts by Financier</td>
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<tr>
<td>3</td>
<td>Expenditure Accounts by Components - Base Costs</td>
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<tr>
<td>4</td>
<td>Expenditure Accounts by Components - Totals Including Contingencies</td>
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<td>5</td>
<td>Components Project Cost Summary</td>
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<td>6</td>
<td>Expenditure Accounts Project Cost Summary</td>
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<td>7</td>
<td>Project Components by Year -- Base Costs</td>
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<tr>
<td>8</td>
<td>Project Components by Year -- Totals Including Contingencies</td>
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<td>9</td>
<td>Expenditure Accounts by Years -- Base Costs</td>
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<td>10</td>
<td>Expenditure Accounts by Years -- Totals Including Contingencies</td>
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<td>11</td>
<td>Disbursement Accounts by Financiers</td>
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<td>12</td>
<td>Disbursements by Semesters and Government Cash Flow</td>
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### Table 1: Components by Financier

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<tr>
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<th>FARMS</th>
<th>IFAD GRANT</th>
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</thead>
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<tr>
<td></td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
</tr>
<tr>
<td>A. Investment in farmer services</td>
<td>2,183 48.8</td>
<td>2,181 48.7</td>
<td>- -</td>
<td>112 2.5</td>
<td>4,476 18.7</td>
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<tr>
<td>1. Enhancing public services</td>
<td>1,939 49.9</td>
<td>1,442 37.1</td>
<td>184 4.7</td>
<td>318 8.2</td>
<td>3,883 16.2</td>
</tr>
<tr>
<td>2. Improving community and private services</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>70 100.0</td>
<td>70 0.3</td>
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<tr>
<td>3. Support to policy engagement</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4,122 48.9</td>
<td>3,623 43.0</td>
<td>184 2.2</td>
<td>500 5.9</td>
<td>8,429 35.1</td>
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<tr>
<td>B. Livelihood investments and access to financial services</td>
<td>229 2.4</td>
<td>- -</td>
<td>9,502 97.6</td>
<td>- -</td>
<td>9,730 40.6</td>
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<tr>
<td>1. Grants for graduation into sustainable livelihoods</td>
<td>229 1.7</td>
<td>3,900 28.6</td>
<td>9,502 69.7</td>
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<td>13,631 56.6</td>
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<td>2. Lending facility for rural businesses</td>
<td>- -</td>
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<td>- -</td>
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<td>- -</td>
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<tr>
<td>C. Project management</td>
<td>340 17.6</td>
<td>877 45.4</td>
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<td>1,932 8.1</td>
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<tr>
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<td>4,690 19.5</td>
<td>8,400 35.0</td>
<td>10,400 43.4</td>
<td>500 2.1</td>
<td>23,991 100.0</td>
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*a Including studies and technical assistance

### Table 2: Expenditure Accounts by Financier

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<tr>
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<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
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<tr>
<td></td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
<td>Amount (%)</td>
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<td>I. Investment Costs</td>
<td>365 11.3</td>
<td>1,237 38.4</td>
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<td>- -</td>
<td>4,109 17.1</td>
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<td>B. Equipment and Material</td>
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<td>453 89.7</td>
<td>- -</td>
<td>- -</td>
<td>505 2.1</td>
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<tr>
<td>C. Goods and Services</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>D. Grant &amp; Subsidies</td>
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<td>- -</td>
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<td>8,300 34.6</td>
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<td>E. Trainings and workshop</td>
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<td>93 18.2</td>
<td>3 0.7</td>
<td>334 65.2</td>
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<td>F. Works</td>
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<td>142 84.0</td>
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<td>- -</td>
<td>169 0.7</td>
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<td>G. Credit, guarantee fund /b</td>
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<td>- -</td>
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<td>500 2.1</td>
<td>23,991 100.0</td>
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*a Including studies and technical assistance

*b Financial instruments
### Table 3: Expenditure Accounts by Components - Base Costs

<table>
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<tr>
<th></th>
<th>Investment in farmer services</th>
<th>Livelihood investments and access to financial services</th>
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<tbody>
<tr>
<td></td>
<td>Enhancing community services</td>
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<tr>
<td></td>
<td>enhancing community</td>
<td>and private services</td>
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<tr>
<td></td>
<td>public services</td>
<td>services</td>
</tr>
<tr>
<td></td>
<td>Investment Costs</td>
<td></td>
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<tr>
<td>I. Investment Costs</td>
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<td></td>
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<td>D. Grant &amp; Subsidies</td>
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<td>-</td>
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<td>E. Trainings and workshops</td>
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<td>360</td>
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<td>F. Works</td>
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<td>-</td>
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<td>II. Recurrent Costs</td>
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<td></td>
</tr>
<tr>
<td>A. Salaries &amp; Allowances</td>
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<tr>
<td>B. Operating Costs</td>
<td>-</td>
<td>-</td>
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<td>Total BASELINE COSTS</td>
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<tr>
<td>Physical Contingencies</td>
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<td>-</td>
</tr>
<tr>
<td>Price Contingencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>87</td>
<td>83</td>
</tr>
<tr>
<td>Foreign</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Subtotal Inflation</td>
<td>87</td>
<td>93</td>
</tr>
<tr>
<td>Devaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal Price Contingencies</td>
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<td>93</td>
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<td>Total PROJECT COSTS</td>
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<td>3,883</td>
</tr>
<tr>
<td>Taxes</td>
<td>96</td>
<td>189</td>
</tr>
<tr>
<td>Foreign Exchange</td>
<td>-</td>
<td>262</td>
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</table>

\( a \) Including studies and technical assistance  
\( b \) Financial instruments
## Table 4: Expenditure Accounts by Components - Totals Including Contingencies

<table>
<thead>
<tr>
<th></th>
<th>Investment in farmer services</th>
<th>Livelihood investments and access to financial services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Improving community</td>
<td>Grants for graduation into sustainable livelihoods</td>
</tr>
<tr>
<td></td>
<td>Enhancing public services</td>
<td>Support to policy engagement</td>
</tr>
<tr>
<td></td>
<td>and private services</td>
<td>Lending facility for rural businesses</td>
</tr>
<tr>
<td></td>
<td>Project management</td>
<td>Total</td>
</tr>
<tr>
<td>I. Investment Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Consultancies /a</td>
<td>585</td>
<td>880</td>
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<td>B. Equipment and Material</td>
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<td>200</td>
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<td>C. Goods and Services</td>
<td>- 505</td>
<td>-</td>
</tr>
<tr>
<td>D. Grant &amp; Subsidies</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>E. Trainings and workshop</td>
<td>77</td>
<td>379</td>
</tr>
<tr>
<td>F. Works</td>
<td>- 169</td>
<td>-</td>
</tr>
<tr>
<td>G. Credit, guarantee fund</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Investment Costs</td>
<td>4,476</td>
<td>2,133</td>
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<tr>
<td>ii. Recurrent Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salaries &amp; Allowances</td>
<td>- 1,750</td>
<td>-</td>
</tr>
<tr>
<td>B. Operating Costs</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Recurrent Costs</td>
<td>- 1,750</td>
<td>-</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>4,476</td>
<td>3,883</td>
</tr>
<tr>
<td>Taxes</td>
<td>96</td>
<td>189</td>
</tr>
<tr>
<td>Foreign Exchange</td>
<td>- 262</td>
<td>-</td>
</tr>
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</table>

\*a Including studies and technical assistance
\*b Financial instruments

## Table 5: Components Project Cost Summary

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<th>(Local '000)</th>
<th>(US$ '000)</th>
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<tbody>
<tr>
<td></td>
<td>Local</td>
<td>Foreign</td>
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<tr>
<td>A. Investment in farmer services</td>
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<tr>
<td>1. Enhancing public services</td>
<td>3,116</td>
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<td>2. Improving community and private services</td>
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<td>Subtotal</td>
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<td>179</td>
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<td>B. Livelihood investments and access to financial services</td>
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<td></td>
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<td>1. Grants for graduation into sustainable livelihoods</td>
<td>6,724</td>
<td>136</td>
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<td>2. Lending facility for rural businesses</td>
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<tr>
<td>Subtotal</td>
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<td>C. Project management</td>
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<td>Total BASELINE COSTS</td>
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<td>394</td>
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<tr>
<td>Physical Contingencies</td>
<td>6</td>
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<tr>
<td>Price Contingencies</td>
<td>233</td>
<td>8</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>16,631</td>
<td>403</td>
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</table>
Table 6: Expenditure Accounts Project Cost Summary

The Hashemite Kingdom of Jordan
Small-ruminants Investment and Graduating Households in Transition (SIGHT)
Expenditure Accounts Project Cost Summary

| % | Total
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<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Local '000</td>
<td>Foreign '000</td>
<td>Total '000</td>
<td>Local '000</td>
<td>Foreign '000</td>
<td>Total '000</td>
<td></td>
</tr>
</tbody>
</table>

I. Investment Costs

A. Consultancies /a
2,046 136 2,182 2,881 192 3,073 6 13
B. Equipment and Material
2,769 103 2,872 3,900 145 4,045 4 17
C. Goods and Services
238 110 348 336 155 491 32 2
D. Grant & Subsidies
5,893 - 5,893 8,300 - 8,300 - 35
E. Trainings and workshop
348 - 348 491 - 491 - 2
F. Works
110 - 110 155 - 155 - 1
G. Credit, guarantee fund /b
2,769 - 2,769 3,900 - 3,900 - 16

Total Investment Costs
14,173 349 14,522 19,963 491 20,454 2 87

II. Recurrent Costs

A. Salaries & Allowances
2,173 - 2,173 3,061 - 3,061 - 13
B. Operating Costs
45 - 45 91 - 91 - 50 1

Total Recurrent Costs
2,219 45 2,264 3,125 64 3,189 2 13

Total BASELINE COSTS
16,392 394 16,786 23,087 555 23,643 2 100

Physical Contingencies
6 - 6 8 - 8 - 1
Price Contingencies
233 - 233 329 - 329 - 1

Total PROJECT COSTS
16,631 403 17,034 23,424 567 23,991 2 101

\a Including studies and technical assistance
\b Financial instruments

Table 7: Project Components by Year -- Base Costs

The Hashemite Kingdom of Jordan
Small-ruminants Investment and Graduating Households in Transition (SIGHT)
Project Components by Year -- Base Costs

| (US$ '000) |
|---|---|---|---|---|---|---|
| Base Cost |
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total |

A. Investment in farmer services
1. Enhancing public services
221 1,753 952 522 522 417 4,089
2. Improving community and private services
61 1,073 868 671 581 531 3,783
3. Support to policy engagement
- 20 30 20 - - 70
Subtotal
281 2,846 1,850 1,213 1,103 948 8,242

B. Livelihood investments and access to financial services
1. Grants for graduation into sustainable livelihoods
82 1,664 2,819 3,184 1,879 34 9,662
2. Lending facility for rural businesses
- 776 776 783 783 783 3,900
Subtotal
82 2,440 3,595 3,967 2,662 817 13,562
C. Project management
45 275 272 270 270 297 1,809

Total BASELINE COSTS
819 5,561 5,717 5,450 4,035 2,062 23,643

Physical Contingencies
- 4 - 4 - 4 - 8

Price Contingencies
Inflation
Local
6 69 76 64 68 45 329
Foreign
0 4 3 3 0 1 12
Subtotal Inflation
6 74 79 67 69 46 341
Devaluation
- - - - - - -
Subtotal Price Contingencies
6 74 79 67 69 46 341

Total PROJECT COSTS
825 5,638 5,800 5,517 4,103 2,108 23,991

Taxes
86 162 143 111 79 20 601
Foreign Exchange
105 204 105 72 40 40 567
Table 8: Project Components by Year -- Totals Including Contingencies

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total</th>
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<td>A. Investment in farmer services</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Enhancing public services</td>
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<td>980</td>
<td>530</td>
<td>532</td>
<td>417</td>
<td>4,476</td>
</tr>
<tr>
<td>2. Improving community and private services</td>
<td>61</td>
<td>1,096</td>
<td>895</td>
<td>689</td>
<td>596</td>
<td>545</td>
<td>3,883</td>
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<td>3. Support to policy engagement</td>
<td>-</td>
<td>20</td>
<td>30</td>
<td>20</td>
<td>-</td>
<td>70</td>
<td>70</td>
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<td>284</td>
<td>2,910</td>
<td>1,239</td>
<td>1,129</td>
<td>963</td>
<td>8,429</td>
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<td></td>
<td></td>
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<td>783</td>
<td>783</td>
<td>783</td>
<td>3,900</td>
<td>3,900</td>
</tr>
<tr>
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<td>3,991</td>
<td>2,683</td>
<td>817</td>
<td>13,631</td>
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<td>C. Project management</td>
<td>460</td>
<td>282</td>
<td>284</td>
<td>287</td>
<td>292</td>
<td>328</td>
<td>1,932</td>
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<td>5,800</td>
<td>5,517</td>
<td>4,103</td>
<td>2,108</td>
<td>23,991</td>
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Table 9: Expenditure Accounts by Years -- Base Costs

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<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total</th>
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<td></td>
</tr>
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<td>64</td>
<td>68</td>
<td>45</td>
<td>329</td>
</tr>
<tr>
<td>Foreign</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td>Subtotal Inflation</td>
<td>6</td>
<td>74</td>
<td>79</td>
<td>67</td>
<td>69</td>
<td>46</td>
<td>341</td>
</tr>
<tr>
<td>Devaluation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal Price Contingencies</td>
<td>6</td>
<td>74</td>
<td>79</td>
<td>67</td>
<td>69</td>
<td>46</td>
<td>341</td>
</tr>
<tr>
<td>Total PROJECT COSTS</td>
<td>825</td>
<td>5,638</td>
<td>5,800</td>
<td>5,517</td>
<td>4,103</td>
<td>2,108</td>
<td>23,991</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes</td>
<td>86</td>
<td>162</td>
<td>143</td>
<td>111</td>
<td>79</td>
<td>20</td>
<td>601</td>
</tr>
<tr>
<td>Foreign Exchange</td>
<td>105</td>
<td>204</td>
<td>105</td>
<td>72</td>
<td>40</td>
<td>40</td>
<td>567</td>
</tr>
</tbody>
</table>
Table 10: Expenditure Accounts by Years -- Totals Including Contingencies

The Hashemite Kingdom of Jordan
Small-ruminants Investment and Graduating Households in Transition (SIGHT)
Expenditure Accounts by Years -- Totals Including Contingencies
(US$ '000)

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Investment Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Consultancies /a</td>
<td>380</td>
<td>599</td>
<td>703</td>
<td>706</td>
<td>583</td>
<td>255</td>
<td>3,226</td>
</tr>
<tr>
<td>B. Equipment and Material</td>
<td>134</td>
<td>1,859</td>
<td>864</td>
<td>417</td>
<td>417</td>
<td>417</td>
<td>4,109</td>
</tr>
<tr>
<td>C. Goods and Services</td>
<td>3</td>
<td>164</td>
<td>167</td>
<td>100</td>
<td>36</td>
<td>36</td>
<td>505</td>
</tr>
<tr>
<td>D. Grant &amp; Subsidies</td>
<td>-</td>
<td>1,400</td>
<td>2,460</td>
<td>2,820</td>
<td>1,620</td>
<td>-</td>
<td>8,300</td>
</tr>
<tr>
<td>E. Trainings and workshop</td>
<td>76</td>
<td>157</td>
<td>140</td>
<td>82</td>
<td>51</td>
<td>7</td>
<td>513</td>
</tr>
<tr>
<td>F. Works</td>
<td>-</td>
<td>84</td>
<td>86</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>169</td>
</tr>
<tr>
<td>G. Credit, guarantee fund /b</td>
<td>-</td>
<td>776</td>
<td>776</td>
<td>783</td>
<td>783</td>
<td>783</td>
<td>3,900</td>
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<tr>
<td><strong>Total Investment Costs</strong></td>
<td><strong>593</strong></td>
<td><strong>5,039</strong></td>
<td><strong>5,196</strong></td>
<td><strong>4,906</strong></td>
<td><strong>3,490</strong></td>
<td><strong>1,498</strong></td>
<td><strong>20,723</strong></td>
</tr>
</tbody>
</table>

| II. Recurrent Costs  |        |        |        |        |        |        |           |
| A. Salaries & Allowances | 215    | 577    | 582    | 586    | 590    | 587    | 3,137     |
| B. Operating Costs    | 18     | 22     | 23     | 23     | 23     | 23     | 131       |
| **Total Recurrent Costs** | **233** | **600** | **604** | **609** | **613** | **610** | **3,268** |
| **Total PROJECT COSTS** | **825** | **5,638** | **5,800** | **5,517** | **4,103** | **2,108** | **23,991** |

\(a\) Including studies and technical assistance
\(b\) Financial instruments

Table 11: Disbursement Accounts by Financiers

The Hashemite Kingdom of Jordan
Small-ruminants Investment and Graduating Households in Transition (SIGHT)
Disbursement Accounts by Financiers
(US$ '000)

<table>
<thead>
<tr>
<th>The Government</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
</tr>
<tr>
<td>1. Consultancies_DA</td>
<td>358</td>
<td>11.3</td>
<td>1,237</td>
<td>38.4</td>
</tr>
<tr>
<td>2. Equipment and Material_DA</td>
<td>2,140</td>
<td>52.1</td>
<td>1,969</td>
<td>47.9</td>
</tr>
<tr>
<td>3. Goods and Services_DA</td>
<td>52</td>
<td>10.3</td>
<td>453</td>
<td>9.7</td>
</tr>
<tr>
<td>4. GRANT_DA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5. Workshops_DA</td>
<td>82</td>
<td>16.0</td>
<td>93</td>
<td>18.2</td>
</tr>
<tr>
<td>6. Works_DA</td>
<td>27</td>
<td>16.0</td>
<td>142</td>
<td>84.0</td>
</tr>
<tr>
<td>7. Salaries and Allowances_DA</td>
<td>1,949</td>
<td>62.1</td>
<td>577</td>
<td>18.4</td>
</tr>
<tr>
<td>8. Operating Costs_DA</td>
<td>75</td>
<td>56.8</td>
<td>28</td>
<td>21.6</td>
</tr>
<tr>
<td>9. Credit, Guarantee Funds_DA</td>
<td>-</td>
<td>-</td>
<td>3,900</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total PROJECT COSTS</strong></td>
<td>4,690</td>
<td>19.5</td>
<td>8,400</td>
<td>35.0</td>
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</table>
Table 12: Disbursements by Semesters and Government Cash Flow

<table>
<thead>
<tr>
<th>Semester</th>
<th>IFAD Loan</th>
<th>FARMS</th>
<th>IFAD GRANT</th>
<th>Total</th>
<th>Costs</th>
<th>Cash Flow</th>
<th>Cumulative Cash Flow</th>
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<tbody>
<tr>
<td>1</td>
<td>222</td>
<td>118</td>
<td>9</td>
<td>350</td>
<td>413</td>
<td>-63</td>
<td>-63</td>
</tr>
<tr>
<td>2</td>
<td>222</td>
<td>118</td>
<td>9</td>
<td>350</td>
<td>413</td>
<td>-63</td>
<td>-126</td>
</tr>
<tr>
<td>3</td>
<td>1369</td>
<td>888</td>
<td>77</td>
<td>2334</td>
<td>2819</td>
<td>-485</td>
<td>-611</td>
</tr>
<tr>
<td>4</td>
<td>1369</td>
<td>888</td>
<td>77</td>
<td>2334</td>
<td>2819</td>
<td>-485</td>
<td>-1096</td>
</tr>
<tr>
<td>5</td>
<td>882</td>
<td>1460</td>
<td>81</td>
<td>2424</td>
<td>2900</td>
<td>-476</td>
<td>-1572</td>
</tr>
<tr>
<td>6</td>
<td>882</td>
<td>1460</td>
<td>81</td>
<td>2424</td>
<td>2900</td>
<td>-476</td>
<td>-2048</td>
</tr>
<tr>
<td>7</td>
<td>599</td>
<td>1646</td>
<td>53</td>
<td>2298</td>
<td>2758</td>
<td>-461</td>
<td>-2508</td>
</tr>
<tr>
<td>8</td>
<td>599</td>
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<td>-461</td>
<td>-2969</td>
</tr>
<tr>
<td>9</td>
<td>575</td>
<td>1002</td>
<td>30</td>
<td>1607</td>
<td>2052</td>
<td>-445</td>
<td>-3414</td>
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<tr>
<td>10</td>
<td>575</td>
<td>1002</td>
<td>30</td>
<td>1607</td>
<td>2052</td>
<td>-445</td>
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<tr>
<td>11</td>
<td>552</td>
<td>86</td>
<td>-</td>
<td>638</td>
<td>1054</td>
<td>-416</td>
<td>-4274</td>
</tr>
<tr>
<td>12</td>
<td>552</td>
<td>86</td>
<td>-</td>
<td>638</td>
<td>1054</td>
<td>-416</td>
<td>-4690</td>
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<tr>
<td>Total</td>
<td>8400</td>
<td>10400</td>
<td>500</td>
<td>19301</td>
<td>23991</td>
<td>-4690</td>
<td>-4690</td>
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</table>
Attachment 9.2:  Detailed Project costs (EUR)

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.1 Enhancing public services</td>
</tr>
<tr>
<td>2</td>
<td>1.2 Improving community and private services</td>
</tr>
<tr>
<td>3</td>
<td>1.3 Support to policy engagement</td>
</tr>
<tr>
<td>4</td>
<td>2.1 Grants for graduation into sustainable livelihoods</td>
</tr>
<tr>
<td>5</td>
<td>2.2 Lending facility for rural businesses</td>
</tr>
<tr>
<td>6</td>
<td>3 Project management</td>
</tr>
</tbody>
</table>
The Hashemite Kingdom of Jordan  
Small Ruminant Investments and Graduating Households in Transition (SIGHT)  
Detailed Project Design Report  
Appendix 9: Project cost and financing

### Table 1.1: Enhancing public services

<table>
<thead>
<tr>
<th>Unit</th>
<th>Summary Divisions</th>
<th>Expenditure Account</th>
<th>Fin. Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Base Cost (US$ '000)</td>
<td>Totals Including Contingencies (US$ '000)</td>
</tr>
<tr>
<td><strong>I. Investment Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Enhancing public services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehabilitation of stations and training centre</td>
<td>lumpsum</td>
<td>-530</td>
<td>530</td>
</tr>
<tr>
<td>Stations operating and maintenance costs GOJ la</td>
<td>lumpsum</td>
<td>-22</td>
<td>22</td>
</tr>
<tr>
<td>Small-ruminants investment</td>
<td>head</td>
<td>-350</td>
<td>350</td>
</tr>
<tr>
<td>Small-ruminants operating costs GOJ lb</td>
<td>per year</td>
<td>-396</td>
<td>396</td>
</tr>
<tr>
<td>Diagnostic laboratories and artificial insemination labs lc</td>
<td>lumpsum</td>
<td>-75</td>
<td>75</td>
</tr>
<tr>
<td>Quarantine and certification facility</td>
<td>lumpsum</td>
<td>-250</td>
<td>-</td>
</tr>
<tr>
<td>Geographic indication</td>
<td>lumpsum</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>70</td>
<td>1,632</td>
</tr>
<tr>
<td>2. Technical Assistance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical support and trainings for staff</td>
<td>per year</td>
<td>31</td>
<td>100</td>
</tr>
<tr>
<td>Trainings to government breeding stations' staff</td>
<td>per year</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Trainings for GFTs and FSTs</td>
<td>per year</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>86</td>
<td>121</td>
</tr>
<tr>
<td>3. Improving animal traceability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Equipment ld</td>
<td>lumpsum</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>b. Technical assistance</td>
<td>lumpsum</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

---

a. It includes cost of electricity, consumable materials, maintenance of stations etc. These costs are estimated and will be in kind contribution of GOJ

b. It includes cost of feed, water and medicines for the animals. These costs are estimated and will be in kind contribution of GOJ

c. 5 laboratories
### Detailed Costs

#### I. Investment Costs

1. **Improving community and private services**
   
   **A. Establishment of field support teams**
   
   **Farmer support teams operating costs a**
   
   per year 5,000 - 15 - - - 15 - 15 - - - 15 E&M LOAN (100%)
   
   **Vehicles FSTs b**
   
   per vehicle 30,000 - 180 - - - 180 - 185 - - - 185 EU&M LOAN (100%)
   
   **Farmer support teams allowances c**
   
   per year - 15 15 15 15 15 15 15 15 15 75 CONSULTANCES LOAN (80%), FARMS (20%)
   
   **Allowances for GFTs d**
   
   per year - 33 33 33 33 33 163 - 33 33 33 33 33 163 G&S LOAN (100%)
   
   **Other allowances e**
   
   per year 3 3 3 3 3 3 18 3 3 3 3 3 18 G&S LOAN (100%)

   **Subtotal**
   
   3 376 181 181 181 1,101 3 385 187 190 193 195 1,153

   **2. Trainings, studies and technical assistance**

   **Technical support to cooperatives and farmers’ groups**

   per year - 45 45 - - - 90 - 46 47 - - - 94 TRAININGS GRANT (100%)

   **Trainings of beneficiaries**

   per year - 80 80 70 40 - 270 - 82 84 75 44 - 285 TRAININGS GRANT (100%)

   **Short-term technical assistance f**

   per year 20 20 10 10 10 - 70 20 20 10 10 - 70 CONSULTANCES LOAN (50%), FARMS (50%)

   **Subtotal**

   20 145 135 80 50 - 430 20 149 141 85 54 - 449

   **3. Pilot investments in rangeland reserves**

   **Rangeland reserves baseline assessment g**

   per reserve 5,500 17 - - - - - 17 - - - - 17 CONSULTANCES LOAN (100%)

   **Participatory rangeland reserves management plan h**

   per reserve 7,000 21 - - - - - 21 - - - - 21 CONSULTANCES LOAN (100%)

   **Reserves restoration i**

   per year - 55 55 - - - - 110 - 57 58 - - - 114 G&S LOAN (100%)

   **Hafir/wells construction**

   per year - 78 78 - - - - 155 - 84 86 - - - 169 WORKS LOAN (100%)

   **Subtotal**

   58 133 133 - - - - 393 38 140 143 - - - 322

   **4. Enhancing livestock nutrition**

   **Enhancing crop livestock nutrition**

   per year - 70 70 60 - - 200 - 72 74 64 - - 210 G&S LOAN (100%)

   **Total Investment Costs**

   61 723 518 321 231 181 2,033 61 746 540 339 246 195 2,133

#### II. Recurrent Costs

**A. Government field teams (GFTs)**

**Government field teams (j)**

per year - 350 350 350 350 350 1,750 - 350 350 350 350 350 1,750 S&A GOVT

**Total Recurrent Costs**

- 350 350 350 350 350 1,750 - 350 350 350 350 350 1,750

**Total**

- 61,573 686 671 581 531 3,763 61,1096 895 689 598 540 3,085

---

| a | Includes cost of laptop per team member and start-up office costs |
| b | 2 cars per team |
| c | Includes fuel for cars, daily allowances etc. |
| d | Allowances for 15 people per month |
| e | Allowances for Governorates directors of agriculture ($500 per year x 6 governorates) |
| f | If it includes short-term consultant animal breeder |
| g | Based on 3 reserves |
| h | Based on 3 reserves |
| i | Based on 3 reserves |
| j | This amount includes all staff and operating costs associated to 6 farmer support teams and it is GOJ in kind contribution |
### The Hashemite Kingdom of Jordan
Small Ruminant Investments and Graduating Households in Transition (SIGHT) Project
Detailed Project Design Report
Appendix 9: Project cost and financing

---

#### Table 1.3. Support to policy engagement

<table>
<thead>
<tr>
<th>Summary Divisions</th>
<th>Unit</th>
<th>Base Cost (US$ '000)</th>
<th>Totals Including Contingencies (US$ '000)</th>
<th>Other A</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Investment Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Support to policy engagement</td>
<td>lumpsum</td>
<td>-</td>
<td>20</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>CONSULTANCIES GRANT_ ( 100% )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

#### Table 2.1. Grants for graduation into sustainable livelihoods

<table>
<thead>
<tr>
<th>Summary Divisions</th>
<th>Unit</th>
<th>Base Cost (US$ '000)</th>
<th>Totals Including Contingencies (US$ '000)</th>
<th>Other A</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Investment Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Grants for graduation into sustainable livelihoods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Ultra poor graduation a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants to woman</td>
<td>package</td>
<td>3,000</td>
<td>-</td>
<td>300</td>
<td>600</td>
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<tr>
<td>Grants to youth (men)</td>
<td>package</td>
<td>3,000</td>
<td>-</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td>Grants to men</td>
<td>package</td>
<td>3,000</td>
<td>-</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Fast track graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Grants to Syrian refugees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants to woman</td>
<td>package</td>
<td>2,000</td>
<td>-</td>
<td>200</td>
<td>310</td>
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<tr>
<td>Grants to youth (men)</td>
<td>package</td>
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<td>-</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>Grants to men</td>
<td>package</td>
<td>2,000</td>
<td>-</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Grants to residents of host communities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants to woman</td>
<td>package</td>
<td>2,000</td>
<td>-</td>
<td>200</td>
<td>310</td>
</tr>
<tr>
<td>Grants to youth (men)</td>
<td>package</td>
<td>2,000</td>
<td>-</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>Grants to men</td>
<td>package</td>
<td>2,000</td>
<td>-</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Implementation support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Implementation support and TA</td>
<td>per year</td>
<td>195</td>
<td>325</td>
<td>330</td>
<td>325</td>
</tr>
<tr>
<td>b. Research and support for graduation approach</td>
<td>per year</td>
<td>58</td>
<td>34</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

a Minimum 70% of Syrian refugee targeted

b These studies will need to be gender disaggregated in terms of opportunity and recommendation for women and men
### Detailed Costs

#### Table 2.2. Lending facility for rural businesses

<table>
<thead>
<tr>
<th>Detailed Costs</th>
<th>Unit Cost</th>
<th>Base Cost (US$ '000)</th>
<th>Totals including Contingencies (US$ '000)</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Investment Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Lending facility for rural businesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans for breed improvement loan</td>
<td>7,520</td>
<td>-</td>
<td>1,96 196 196 203 203 203 1,000 - 196 196 203 203 203 1,000 CREDIT LOAN (100%)</td>
<td></td>
</tr>
<tr>
<td>Loans for rural micro businesses loan</td>
<td>5,000</td>
<td>-</td>
<td>290 290 290 290 290 1,450 - 290 290 290 290 290 1,450 CREDIT LOAN (100%)</td>
<td></td>
</tr>
<tr>
<td>Loans for rural small businesses loan</td>
<td>10,000</td>
<td>-</td>
<td>290 290 290 290 290 1,450 - 290 290 290 290 290 1,450 CREDIT LOAN (100%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td></td>
<td>776 776 783 783 783 783 3,900 - 776 776 783 783 783 3,900</td>
<td></td>
</tr>
</tbody>
</table>

#### I. Investment Costs

1. **I. Investment Costs**

   A. **PCU Project Coordination Unit**

   1. Surveys, workshops and audit

      Start-up workshop event 5,000 5 - - - 5 5 - - - - TRAININGS LOAN (100%)  
      Baseline survey survey 46,000 46 - - - - - - - - 46 CONSULTANCES FARMS (100%)  
      Impact survey survey 50,000 - - - - 50 50 - - - - 56 CONSULTANCES LOAN (100%)  
      M&E studies /a per year 40 - - - - 40 - - - - 40 CONSULTANCES LOAN (50%), FARMS (50%)  
      M & M/E w-erchs., stakeholder consultations, annual s event 6,500 13 7 7 7 7 46 13 7 7 7 7 48 TRAININGS LOAN (100%)  
      Gender and targeting workshop /c event 2,000 2 - - - 4 2 - - - - 4 TRAININGS FARMS (100%)  
      Annual audit event 15,000 15 15 15 15 15 75 15 15 16 16 16 - 79 CONSULTANCES LOAN (100%)  

2. **Technical assistance**

   Short-term technical assistance per year 10 10 5 5 5 40 10 10 5 5 5 40 CONSULTANCES LOAN (50%), FARMS (50%)  

3. **Equipment and vehicles**

   Office furniture sat 15,000 15 - - - - - - - - 15 EBM LOAN (100%)  
   Computers sat 1,200 5 - - - - - - - - 5 EBM LOAN (100%)  
   Mobile phones, cameras, printers, scanners, data show lumpsum 6,000 6 - - - - 6 6 - - - - 6 EBM LOAN (100%)  
   Vehicle lumpsum 34,500 69 - - - - 69 70 - - - - 70 EBM LOAN (100%)  

   Total Investment Costs 226 32 29 27 27 62 400 227 32 30 28 29 68 414  

#### II. Recurrent Costs

A. **Salaries /d**

   Project Director person.month 4,500 54 54 54 54 54 324 55 56 57 58 59 60 344 S&A LOAN (50%), FARMS (50%)  
   Programme Officer person.month 2,100 25 25 25 25 25 151 25 26 26 27 28 28 161 S&A LOAN (50%), FARMS (50%)  
   M&E Specialist person.month 2,600 31 31 31 31 31 197 32 32 33 33 34 35 199 S&A LOAN (50%), FARMS (50%)  
   Financial Management Specialist /e person.month 1,300 16 16 16 16 16 94 16 16 16 17 17 17 99 S&A GOVT  
   Procurement Specialist /f person.month 1,300 16 16 16 16 16 94 16 16 16 17 17 17 99 S&A GOVT  
   Gender and Livelihood Specialist person.month 2,800 31 31 31 31 31 187 32 32 33 33 34 35 199 S&A LOAN (50%), FARMS (50%)  
   Driver person.month 1,300 16 16 16 16 16 94 16 16 16 17 17 17 99 S&A LOAN (50%), FARMS (50%)  

   Subtotal 188 188 188 188 188 188 1,130 190 194 198 202 206 210 1,200  

B. **Meetings and allowances**

   Allowances for government staff /g per year 200 5 5 5 5 5 29 5 5 5 5 5 31 S&A LOAN (100%)  
   Meetings and allowances per year 10 19 18 18 18 10 92 10 18 18 18 10 92 S&A LOAN (50%), FARMS (50%)  
   Trainers and capacity building for PMU staff per year 10 10 10 10 10 10 10 11 11 11 11 11 64 S&A FARMS (100%)  

   Subtotal 25 33 33 33 33 25 181 25 33 34 34 34 27 186  

C. **Operations and maintenance**

   Vehicles and travel costs /h per year 8 12 12 12 12 12 68 8 12 12 12 12 12 68 OC LOAN (50%), FARMS (50%)  
   Other office operating and indirect costs per year 10 10 10 10 10 10 10 10 11 11 11 11 11 64 OC GOVT  

   Subtotal 18 22 22 22 22 22 22 118 12 22 22 23 23 23 131  

   Total Recurrent Costs 437 242 242 242 242 242 242 1,439 233 230 264 259 259 280 1,516  

   Total 457 275 272 270 270 297 1,839 460 282 284 287 292 328 1,932

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a. It includes the cost for evaluation of breeding programme  
b. It will include a gender assessment of project activities before the mid-term review  
c. Two day planning workshop with stakeholders (PMU, NGOs, FSTs, etc.)  
d. Includes social security and medical insurance  
e. Position financed by the government, Part-time  
f. Position financed by the government, Part-time  
g. Allowances for procurement and financial management specialist  
h. It includes maintenance of farmer support teams cars under component 1
Appendix 10: Economic and Financial Analysis

A. Overview

1. A financial and economic analysis was undertaken to assess the financial and economic impact of the SIGHT project on its primary target group and capturing any externalities generated as a result. The following information gathered during the design mission has been used to set up the analyses: (i) interviews with potential beneficiaries, including Syrian refugees, (ii) interviews with public and private local service providers, (iii) mission and livestock expert estimates, (iii) information from similar projects implemented by local NGOs, such JOHUD and the Jordan River Foundation, and (iv) UNHCR's data. In particular, information on labour and input requirements for various operations, capital costs, prevailing wages, yields, farm gate and market prices of commodities, and transport costs were collected. Conservative assumptions were made both for inputs and outputs in order to take account of possible risks.

2. Benefits are expected to derive from (i) increasing small-ruminants’ productivity through enhancing public and private services and capacity building; (ii) capitalising on the opportunity for attracting grant resources for improving the livelihoods of Syrian refugees and host communities, particularly women and youth, through piloting a comprehensive graduation approach in the country for the first time; and (iii) increasing access to finance for rural and agriculture households through commercial banks and MFIs. In order to represent the project financial benefits, eight financial models have been prepared. The financial models have also been used as building blocks for the economic analysis.

3. Number of beneficiaries. The project is expected to benefit about 11,920 households and 57,216 beneficiaries, assuming an average household size of 4.8 members.\textsuperscript{117} Component 1 will benefit approximately 7720 households, who will be provided with free of cost training and advisory services to improve the productivity of their flocks. Through the graduation programme, component 2 is expected to benefit 3,650 vulnerable women and youth from among the Jordanian host communities and Syrian Refugees with grant-based income generating packages for on-farm and off-farm rural enterprises to enable them to graduate out of poverty. The project will also provide 550 smallholder farmers with micro and small loans for rural on-farm and off-farm businesses. A summary of the total number of households by component is shown in Table 10.1. As explained in the economic analysis section, in order to conservatively calculate the project economic internal rate of return (ERR), the final economic aggregation considers beneficiaries' adoption rate of 75%.

\textsuperscript{117} Jordan Population and Housing Census, 2015.
### Table 10.1: Expected total number of households and beneficiaries by component

<table>
<thead>
<tr>
<th>Component</th>
<th>Total Households</th>
<th>Syrian Refugee (HHs)</th>
<th>Total Beneficiaries</th>
<th>Syrian Refugees (Individuals)</th>
<th>Women</th>
<th>Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Improving community and private sector services</td>
<td>7,720</td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>1.3 Support to policy engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Component 1</strong></td>
<td>7,720</td>
<td>37,056</td>
<td></td>
<td>3,088</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>2. Business Development and Access to Financial Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Grants for graduation into sustainable livelihoods</td>
<td>3,650</td>
<td>2,025</td>
<td>17,520</td>
<td>10,125</td>
<td>1,825</td>
<td>913</td>
</tr>
<tr>
<td>Poor</td>
<td>2,650</td>
<td>1,325</td>
<td>12,720</td>
<td>6,625</td>
<td>1,325</td>
<td>331</td>
</tr>
<tr>
<td>Extreme Poor</td>
<td>1,000</td>
<td>700</td>
<td>4,800</td>
<td>3,500</td>
<td>500</td>
<td>250</td>
</tr>
<tr>
<td>2.2 Lending facility for rural businesses</td>
<td>550</td>
<td>2,640</td>
<td></td>
<td>165</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Component 2</strong></td>
<td>4,200</td>
<td>2,025</td>
<td>20,160</td>
<td>10,125</td>
<td>1,990</td>
<td>913</td>
</tr>
<tr>
<td><strong>Total Project beneficiaries</strong></td>
<td>11,920</td>
<td>2,025</td>
<td>57,216</td>
<td>10,125</td>
<td>5,078</td>
<td>1,888</td>
</tr>
</tbody>
</table>

#### B. Financial Analysis

4. The primary objective of the financial analysis is to determine the financial viability and incentives of the target group for engaging in the project activities, by examining the impact of project interventions on family labour, cash flow and net incomes. Based on field visits, consultations with experienced local NGOs implementing similar projects in Jordan, and on expected project activities, a number of indicative financial models were identified during the project design process. Nine illustrative financial models were prepared to demonstrate the financial viability of the investments. The models are grouped as follows: (i) one livestock model to show benefits deriving from improved breed, enhanced public and private services and technical assistance, (ii) three activity models to represent potential activities on which Jordanian host communities’ households may decide to invest through the grants window, (iii) one on-farm and two off-farm activity models, specifically representing potential activities for Syrian refugees household and the impact on their incomes, and (iv) two indicative activity models for loan financing. A cash-flow analysis was carried out to present the “with” and “without” project analysis. All models form the building blocks for the economic analysis.

5. The main difference between activity models developed for Jordanian host community and Syrian refugee households is the assumption made in the without project scenario, where different yearly incomes are considered in order to represent the two scenarios and not to overestimate benefits.

6. **Key assumptions.** Key assumptions are as follows:
   - **Exchange rate.** The exchange rate used in the analysis is fixed at USD 1 = JD 0.71.
   - **Prices.** The financial prices for project inputs and products were collected in the field by the design team. Prices used represent estimates of the average seasonal prices and the analysis is carried out using constant prices.
   - **Labour.** Family labour has been valued both in financial and economic analysis. It has been assumed that both family labour and hired unskilled labour are priced at JD 10 per day, which is the prevailing market rate in rural areas.

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118 The Jordanian Hashemite Fund for Human Development (JOHUD) and The Jordan River Foundation.
7. **Improved sheep breed livestock model.** This model presents a situation without project (WOP) and a situation with project (WP) over a period of ten years. The average total number of sheep in both scenarios is 100; this is a representative number that is likely to vary in different households. The main project intervention will result in enhancing small ruminants’ management and productivity through increased access to improved rams (Awassi sheep), improved technical assistance, and improved health services. In fact, positive changes in the main livestock parameters – e.g. milking rate, twinning rate, culling rate and mortality rate – are to be considered as consequence of project intervention. The main sources of revenue considered in the model are selling of animals and selling of milk. Wool does not represent a source of revenue because, at the moment, producing it is not considered as a profitable activity.  

8. The main smallholder’s investments is represented by the purchase of improved rams – JD 2,000 – as well as by improved management practices, such as improved feed, that are expected to be a consequence of improved technical assistance (supported by the project). In fact, the models show that, in the WP, farmers modify the quantities and types of feed given to the sheep (e.g. introduction of source of proteins and minerals). The net benefits liquidity of the model is positive already from year 1; however, component two of the project offers different windows for small ruminant holders to access financial services (e.g. access to grants or to loans, based on the household profile).

9. Considering the major constraints that small ruminant holders are currently facing in Jordan, mainly due to the increase in cost of production and to the decrease in animals’ price (as a consequence of the increase in small ruminants imports), the model shows that, if all assumptions are met, a net incremental income of about JD 3,400 per year will be significant for the subsistence of the targeted beneficiaries. Furthermore, by increasing the number of improved sheep available in the market, and the enhanced public services, the benefits of this investment are expected to sustainably continue in the long run and to go beyond the project’s targeted beneficiaries. The profitability indicators of this model are all shown to be positive - IRR 42%, NPV JD 8,646, B/C ratio 1.71, switching values show that benefits can be decreased by up to -42% and costs can increase up to +71% for the NPV to be driven to zero. This illustrates the highly resilient nature of this investment.

10. **Component 2 financial models.** The first part of Component 2 of the project will target about 3,650 entrepreneurial rural residents, including women and youth, facing key challenges, such as lack of access to capital required for investment in micro-enterprises, lack of knowledge and skills, limited access to financial services and high susceptibility to economic shocks. These challenges are intensified for Syrian refugees who also face high levels of indebtedness and poverty, limited access to work permits and restrictions on permissible occupations. The second part of Component 2 will target about 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement.

11. **Income generating activities models for Jordanian host communities’ households.** Three indicative income generating activity models have been developed to show potential activities that could be financed by a grant of USD 2,000 (approximately JD 1,420). During project implementation, the activities chosen will be demand-driven. Grants will be complemented with technical assistance packages, which will be provided by the project. In order not to overestimate the models’ incremental net benefits, all models’ WOP scenarios consider a yearly income, assumed as the amount that beneficiaries will have earned by being employed at JD 310 per month for the same number of month they work in the WP. The

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120 Farmers prefer burning the wool instead of selling it.

121 The choice of these activities is based on: (i) interviews with potential beneficiaries, (ii) Development of Rural and Disadvantaged in Jordan – Customer Needs Analysis Study. Johud, March 2017, and (iii) interviews with NGOs engaged on similar projects.

122 Average salary per month considered in the models.
three indicative models developed are: (i) forage crop model, (ii) pastry shop activity model, and (iii) cheese production activity model.

12. The forage crop (alfalfa) model, on three dunum of land, is based on an investment of JD 1,400, which is used to purchase a sprinkler irrigation system and some inputs. The model shows a gradual alfalfa yield increase from year 1 to year 4 in order to take into account possible initial production problems. The average income is expected to be about JD 5,600 for three dunums/year. As shown in Table 2, all profitability indicators suggest that, for the type of investment it requires, forage production can be a profitable small activity to undertake. The financing analysis carried out at the end of the model shows that the net income after financing is positive from year 1.

13. The pastry shop activity model assumes that a beneficiary asks for a grant in order to open a small family-owned pastry shop. The equipment purchase for the shop is expected to be the main investment for this activity (JD 1,400). A gradual increase in production is assumed and, in order to avoid an overestimation of benefits, the full production achieved on the year 5 is conservatively calculated. As shown in Table 2, all profitability indicators are positive. The net income at full production for this activity is expected to be approximately JD 7,100 per year. The financing analysis shows that the net income after financing is positive already from the first year.

14. The cheese production model assumes that a project beneficiary asks for a grant in order to produce and sell ghee and a typical local sheep dairy product called jammeed. The main investment in this model is (i) the purchase of small equipment to process milk; and (ii) the purchase of main operating inputs, such as milk, gas and spices. In order to produce 1 kg of jammeed and 0.56 kg of ghee, 9.5 kg of milk are needed daily for about 4 months a year. A gradual increase in cheese production is assumed and, in order to avoid an overestimation of benefits, the full production achieved on the fourth year is conservatively calculated. The net income at full production for this activity is expected to be JD 3,600. As shown in Table 10.2, all profitability indicators suggest that, for the type of investment it requires, jammeed and ghee production can be a profitable small activity to be undertaken by poor households, and particularly by women. The financing analysis is shows positive results from year 1.

<table>
<thead>
<tr>
<th>Indicative activity models for grants (Jordanian host communities)</th>
<th>Net income WOP (JD)</th>
<th>Net income WP year 5 (JD)</th>
<th>NPV @ 10% (JD)</th>
<th>B/C</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pastry shop activity model</td>
<td>3,720</td>
<td>6,927</td>
<td>8,082</td>
<td>1.20</td>
<td>55%</td>
</tr>
<tr>
<td>Forage (alfa-alfa) crop model</td>
<td>3,720</td>
<td>6,927</td>
<td>8,082</td>
<td>1.20</td>
<td>55%</td>
</tr>
<tr>
<td>Cheese production model</td>
<td>1,860</td>
<td>3,339</td>
<td>2,981</td>
<td>1.25</td>
<td>32%</td>
</tr>
</tbody>
</table>

15. Syrian refugees activity models. Seventy per cent of the total grants for extreme poor households are allocated to Syrian refugee households, considering that their monthly per capita average income of JD 53.5 is below the national poverty line. Three separate models, specifically for the Syrian refugees, have been developed in order to take into account their level of poverty and to show how project support, through grants for income generating activities and related technical assistance, can change their households' poverty level. In all models, the WOP scenarios consider a yearly income of approximately JD 3,081. On farm and off farm income generating activities represented in this analysis are indicative and will depend on the beneficiaries' demand and on their existing skills. The two indicative models developed are: (i) Syrian sweets production, (ii) soap production, and (iii) okra production. At

123 Production of jammeed, a common local cheese, and ghee.
124 Assumed own land.
125 Production is only 4 months per year.
126 National poverty line in Jordan + 2.23JD/person/day (The United Nations Economic Commission for Europe).
127 Based on per capita income of JD 53.5/month.
128 Income generating activities for Syrian refugees Hh model have been chosen after interviewing potential Syrian project beneficiaries in Jordan.
the end of each model the financing analysis shows that the income after financing is positive from first year.

16. **Syrian sweets production model.** This model presents a situation with and a situation without project intervention over a period of 10 years. The WP scenario shows that the grant – approximately JD 1,400 - is mainly invested in purchasing small equipment for making sweets and part of the operating inputs for the first year. All assumptions are conservatively made and production is increased gradually from year 1 to year 5. The net income\(^\text{129}\) is expected to reach JD 7,900. The net incremental benefits\(^\text{130}\) will be approximately JD 4,800, which will represent a significant change in the household's yearly income. Table 3 summarizes and shows that all profitability indicators for the proposed model are positive.

17. **Soap production model.** In the WP scenario, the grant – of approximately JD 1,400 - is invested in small equipment and in operating inputs to start the small business. This activity's net income\(^\text{131}\) is expected to be approximately JD 6,100. The net incremental benefits\(^\text{132}\) will be approximately JD 3,000, which - although less than in the previous case - will still represent a positive change in the household's yearly income.

18. **Okra farm model.** In the WP scenario, the grant is invested in an on farm activity. The model assumes that the household will rent 5 dunums of land to produce some vegetables. After discussion with beneficiaries and consultation with local experts, this analysis has chosen okra as an indicative crop. In the model the grant is used to invest on a small irrigation system – pipeline, pump, water tank – and to finance initial operating costs. The net income is expected to be JD 6,000 per annum and incremental net benefits in this case will be approximately JD 3,000.

### Table 10.3: Indicative activity models for grants (Syrian refugees)

<table>
<thead>
<tr>
<th>Indicative activity models for grants (Syrian refugees)</th>
<th>Net income WOP (JD)</th>
<th>Net income WP year 5 (JD)</th>
<th>NPV @ 10% (JD)</th>
<th>B/C</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Okra production (5 dunum)</td>
<td>3 082</td>
<td>5 975</td>
<td>2 099</td>
<td>1.24</td>
<td>17%</td>
</tr>
<tr>
<td>Syrian Sweets production</td>
<td>3 082</td>
<td>7 400</td>
<td>1 273</td>
<td>1.20</td>
<td>14%</td>
</tr>
<tr>
<td>Soap production</td>
<td>3 082</td>
<td>6 150</td>
<td>3 039</td>
<td>1.09</td>
<td>38%</td>
</tr>
</tbody>
</table>

19. **Activity models financed by loans.** Two indicative activity models have been developed to represent potential activities on which loans' beneficiaries could invest. The average loan amount is expected to be in the range of JD 5,000 – JD 10,000. This window could also include loans for the purchase of small ruminants for breed improvement (first model presented above). The two activity models are: (i) greenhouse vegetable production, and (ii) purchase of additional small-ruminants.

20. **Greenhouse (high plastic tunnel) vegetable production model.** This model presents the potential benefits deriving from investing in a 0.1 ha greenhouse (high plastic tunnel), where it is assumed that tomatoes will be cultivated. The total investment – of approximately JD 5,000 - comprises the greenhouse structure, plastic covers, tubes for drip irrigation and some initial operating costs. The model, on year 1, conservatively assumes very low tomato yield followed by a gradual increase up to year 4, when full production is expected. The income after labour cost is expected to reach about JD 7,500 per year. The financing analysis, presented at the end of the model, shows that the net income becomes positive after financing already from the first year. All other profitability indicators are shown to be positive, as summarized in Table 4.

21. **Purchase of additional small-ruminants model.** This model shows an investment in an additional number of sheep, including improved rams. The total investment in this case is

\(^{129}\) Before labour cost and assuming labour cost is all family labour.

\(^{130}\) Net Revenues from family labour.

\(^{131}\) Before labour cost and assuming labour cost is all family labour.

\(^{132}\) Net Revenues from family labour.
expected to be approximately JD 5,000. The model assumes that the beneficiary already owns a stock of 100 sheep and therefore it presents a situation without project intervention (stock of 100 sheep) and a situation with project intervention, where the number of small ruminants is increased. When changing the livestock parameters, from the WOP to the WP scenarios, the model takes into account also the benefits accruing from technical assistance provided by the project (in Component 1). In fact, improved management practices are expected to benefit animal productivity. The net income of this activity, assuming that labor will be entirely provided by the family, will be about JD 9,200. All profitability indicators are positive and the financing analysis shows that also the income after financing becomes positive from year 1.

Table 10.4: Indicative activity models for loans

<table>
<thead>
<tr>
<th>Indicative activity models for loans</th>
<th>Net income WOP (JD)</th>
<th>Net income WP year 5 (JD)</th>
<th>NPV @ 10% (JD)</th>
<th>B/C</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse vegetable production model</td>
<td>3,720</td>
<td>7,290</td>
<td>6,966</td>
<td>1.30</td>
<td>26%</td>
</tr>
<tr>
<td>Additional small-ruminants model</td>
<td>6,135</td>
<td>10,252</td>
<td>9,860</td>
<td>1.43</td>
<td>32%</td>
</tr>
</tbody>
</table>

22. In brief, the financial analysis of all proposed models shows acceptable results and suggests project activities are worthwhile to undertake.

C. Economic Analysis

23. The objectives of the economic analysis are: (i) to examine the overall project viability; (ii) to assess the project’s impact and overall economic rate of return; and (iii) to perform sensitivity analyses to assess the benefits from a broad welfare perspective.

24. Key assumptions. The physical inputs and productions established in the financial analysis provided the basis to determine the viability of the project investment in terms of opportunity costs and quantifiable benefits to the economy as a whole. The estimate of the likely economic returns from project interventions are based on the following assumptions:

- Project life has been assumed at 20 years;
- Project inputs and outputs traded are valued at their respective economic prices, and goods are expected to move freely within the project area in response to market demand; and
- The social discount rate adopted for this analysis is 10% and it has been chosen by taking into account the average deposit interest rate in Jordan (4%), the average lending interest rate (9%), the Wall Street Journal interest rate (3.5%) and the microfinance institutions lending rates, which on average vary between 20% - 25%.

25. Project economic costs and benefits. The economic analysis includes the investment and incremental recurrent costs of the project components. The project financial costs have been converted to economic values by removal of price contingencies, tax and duties. In order to avoid double counting, the final aggregation considered only those costs that were not included in the financial models.

26. Benefits Estimation. The incremental benefits stream comprises the economic net values of all developed models. These benefits are then aggregated by the number of households that are estimated to uptake each activity. The analysis conservatively considers an adoption rate of 75% as well as a 60% success rate. Success rate takes into account the possibility that (i) not all farmers will have the same benefits as represented in the model, (ii) some of the new

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133 Average deposit rate, between 2014 and 2016, is 4%. Source: Jordan Country Report, February 2017 prepared by the Economist Intelligence Unit.

134 From year 11, the net incremental benefits are equal to 80% of year 10’s net incremental benefits. This is to take into account of any possible fluctuations within the 20 years period.
income generating activities may fail, and (iii) Syrian refugees may decide to give up on their activities and return their country (if, for example, the current Syrian security situation improves).

Table 5: Household phasing in by activity (table used for economic aggregation)

<table>
<thead>
<tr>
<th>Households’ phasing in by activity</th>
<th>PY1</th>
<th>PY2</th>
<th>PY3</th>
<th>PY4</th>
<th>PY5</th>
<th>PY6</th>
<th>Total HHs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phasing in %</td>
<td>0%</td>
<td>15%</td>
<td>25%</td>
<td>30%</td>
<td>30%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Beneficiaries Adoption rate 75%</td>
<td>0%</td>
<td>11%</td>
<td>19%</td>
<td>23%</td>
<td>23%</td>
<td>0%</td>
<td>75%</td>
</tr>
<tr>
<td>*Success rate %</td>
<td>0%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Sheep improved breed</td>
<td>0</td>
<td>521</td>
<td>869</td>
<td>1,042</td>
<td>1,042</td>
<td>0</td>
<td>3,474</td>
</tr>
<tr>
<td>Jameed production - Grant</td>
<td>0</td>
<td>27</td>
<td>46</td>
<td>55</td>
<td>55</td>
<td>0</td>
<td>183</td>
</tr>
<tr>
<td>Forage Production - Grant</td>
<td>0</td>
<td>27</td>
<td>46</td>
<td>55</td>
<td>55</td>
<td>0</td>
<td>183</td>
</tr>
<tr>
<td>Pastry shop - Grant</td>
<td>0</td>
<td>55</td>
<td>91</td>
<td>110</td>
<td>110</td>
<td>0</td>
<td>366</td>
</tr>
<tr>
<td>Syrian sweets - Grant</td>
<td>0</td>
<td>68</td>
<td>114</td>
<td>137</td>
<td>137</td>
<td>0</td>
<td>456</td>
</tr>
<tr>
<td>Soap model - Syrian Grant</td>
<td>0</td>
<td>34</td>
<td>57</td>
<td>68</td>
<td>68</td>
<td>0</td>
<td>228</td>
</tr>
<tr>
<td>Okra model - Syrian grant</td>
<td>0</td>
<td>34</td>
<td>57</td>
<td>68</td>
<td>68</td>
<td>0</td>
<td>228</td>
</tr>
<tr>
<td>Greenhouse - Loan</td>
<td>0</td>
<td>19</td>
<td>31</td>
<td>37</td>
<td>37</td>
<td>165</td>
<td>289</td>
</tr>
<tr>
<td>Sheep breeding - Loan</td>
<td>0</td>
<td>19</td>
<td>31</td>
<td>37</td>
<td>37</td>
<td>165</td>
<td>289</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>805</td>
<td>1,341</td>
<td>1,609</td>
<td>1,609</td>
<td>330</td>
<td>5,694</td>
</tr>
</tbody>
</table>

*Includes: 1) not all farmers are successful as represented in the model, 2) Syrian refugees return their country because of improved security conditions, 3) new businesses fail for other reasons

27. Economic Pricing. Economic pricing has been based on the following assumptions:
   - The opportunity cost of labour is set at 8.7 JD/day, or 87% of financial cost of labour, which is justified given rural unemployment rate at 13%,\(^{135}\)
   - Economic prices have been calculated for main outputs and inputs,\(^{136}\) starting from CIF prices. Average conversion factors (CF) of 0.94 and 1.03 have been applied to convert respectively outputs and inputs’ financial prices to economic prices.
   - The shadow exchange rate (SER) has been calculated at 1 USD = 0.8 JD; and
   - The Shadow Exchange Ratio Factor (SERF), used to obtain economic costs, has been calculated at 1.11.

28. Economic Rate of Return. The overall economic internal rate of return (EIRR) of the project is estimated at 26% for the base case. The net present value (NPV) of the net benefit stream, discounted at 10%, is USD 50.4 million.

29. Sensitivity Analysis. In order to test the robustness of the above results, a sensitivity analysis has been carried out; the outcomes of which are presented in Table 10. The sensitivity analysis investigates the effect of fluctuations in project costs, project benefits, and delays in implementation on the NPV and ERR. It shows the economic impacts that a decrease in project benefits – up to -50% – will have on the project viability. Similarly, it shows how the economic viability of the project will be affected by an increase of up to 50% in project costs, and by a one to three-year delay in project implementation.

30. The analysis confirms that the economic viability of the project remains attractive as a positive NPV and ERR above 10% are preserved in each case analyzed.

\(^{135}\) Jordan Country Report, February 2017 prepared by the Economist Intelligence Unit.

\(^{136}\) Or for similar outputs inputs, depending on the availability of CIF prices.
Table 6: Sensitivity analysis

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Related Risk</th>
<th>ERR</th>
<th>NPV US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project base case</td>
<td></td>
<td>26%</td>
<td>50 449 030</td>
</tr>
<tr>
<td><strong>Decrease in project benefits</strong></td>
<td>-20%  Failures in the distribution of improved animal stock. Failure of new created businesses. Market/price fluctuations. Delays with trainings. Proper use of skills acquired in trainings</td>
<td>25%</td>
<td>38 469 973</td>
</tr>
<tr>
<td></td>
<td>-30%</td>
<td>24%</td>
<td>32 480 444</td>
</tr>
<tr>
<td></td>
<td>-50%</td>
<td>21%</td>
<td>20 501 387</td>
</tr>
<tr>
<td><strong>Increase in project costs</strong></td>
<td>20%  Market/price fluctuations (changes in market demands). Procurement risks.</td>
<td>25%</td>
<td>48 559 779</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>25%</td>
<td>47 615 153</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>23%</td>
<td>45 725 902</td>
</tr>
<tr>
<td><strong>Delays in project implementation</strong></td>
<td>1 year  Delays in having the Project approved by all parties. Any other unforeseeable event.</td>
<td>24%</td>
<td>36 454 959</td>
</tr>
<tr>
<td></td>
<td>3 years</td>
<td>21%</td>
<td>26 581 920</td>
</tr>
</tbody>
</table>
Appendix 11: Draft Implementation Manual

Chapter 1: Introduction and background

Chapter 2: SIGHT Project Framework
- Project Area
- Target Population
- Project Target Groups
- Gender Targeting
- Youth Targeting
- Project Duration and Overall Financing
- Project Components

Chapter 3: Project Organisation and Management
- Project Management
- Project Steering Committee

Chapter 4: Procurement Procedures
- General Principles for Procurement
- Workflows
- Prior Review by IFAD

Chapter 5: Finance Management
- Project Costs and Financing
- Types of Accounts
- Flow of Funds
- IFAD Disbursement Procedures
- Withdrawal Application
- Audit Procedures
- Audit Report
- Financial Statements
- Project Completion/Financial Closure

Chapter 6: Guidelines for preparing Annual Work Plan and Budget
- Content of AWPB
- AWPB Preparation Calendar
- Review of the AWPB by IFAD

Chapter 7: Progress Reporting

Chapter 8: Implementation Details by Components
- Component 1. Investments in Farmer Services
  - Sub-component 1.1. Enhancing Public Services
  - Sub-component 1.2. Improving Community and Private Sector Services
  - Sub-component 1.3. Support to Policy Engagement
- Component 2. Livelihood Investments and Access to Financial Services
  - Sub-component 2.1. Grants for Graduation into Sustainable Livelihoods
  - Sub-component 2.2. Lending Facility for Rural Businesses
Chapter 9: Progress Reporting
- Semi-annual Progress Reporting
- Annual Progress Reporting

Chapter 10: Monitoring and Evaluation
- Managing for Impact
- M&E Plan
- M&E and Link with Logical Framework
- Results and Impact Management Systems (RIMS)
- Indicators to be Measured by the M&E System
- Staffing for M&E
- Impact Assessment

Chapter 11: Knowledge Management

Chapter 12: Mid-term Review

Chapter 13: IFAD Supervision
- First Implementation Support Mission
- Inception Review
- Areas of Assessment
- Reporting (Aide Memoire/Supervision Report)

Chapter 11: Project Completion Process
- Performance Self-Assessment
- Project Completion/Financing Closure
- Stakeholder Workshop for Completion
- Project Completion Report

Chapter 12: IFAD's Project Evaluation by OIE

KEY ANNEXES
- Project Log-frame, updated
- RIMS Indicators
- Template for AWPB
- TOR for PMU staff
- Procurement Plan
- Sample form for Record of Contracts
- Sample form for tracking individual contracts
- Letter to Borrower
- Checklist for Withdrawal Application
- Terms of Reference for Baseline Survey
Appendix 12: Compliance with IFAD policies

A. Strategic Framework (2016-2025)

1. The project is in line with IFAD’s Strategic Framework 2016-2025. The project activities, implementation arrangements and M&E system have been designed in compliance with IFAD Targeting Policy, IFAD policy on gender equality and women’s empowerment and in line with the approaches outlined in the Framework for Gender Mainstreaming in IFAD investment Operations. The project is designed to be consistent with IFAD’s Private Sector Development and Partnership Strategy, Mainstreaming Nutrition Sensitive Agriculture Action Plan (2016-18), IFAD’s Rural Finance Policy and the associated Decision Tools for Rural Finance. Finally, the project will be aligned with both IFAD’s Climate Change Strategy and its Environment and Natural Resource Management Policy. The preliminary Environmental and Social Category is B, considering that the project approach will lead to improved management of animal raising and rangeland management and focus on animal productivity.

2. IFAD’s Strategic Framework (2016-2025) reiterates its unique mandate of improving rural food security and nutrition and enabling rural women and men to overcome poverty. The framework identified three closely interlinked and mutually reinforcing strategic objectives: Increase poor rural people’s productive capacities; Increase poor rural people’s benefits from market participation; and strengthen the environmental sustainability and climate resilience of poor rural people’s economic activities. SIGHT is designed to meet all three strategic objectives outlined in the strategic framework.

B. Targeting- Reaching the Poor and Gender Mainstreaming

3. The project activities, implementation arrangements and M&E system are designed in compliance with the IFAD targeting strategy as well as the Framework for Mainstreaming Gender in IFAD investments. SIGHT will have a strong poverty, vulnerability and gender focus. The project will focus on the poor smallholder small ruminant farmers, the Jordanian host communities most affected by the influx of Syrian refugees and the highly vulnerable Syrian refugees. The presence of smallholder ruminant farmers and Syrian refugees was the criteria for selection of governorates and will be the criteria for selection of villages within the governorates. The project will further sharpen its poverty focus by conducting a targeting exercise in these areas using poverty criteria to identify beneficiaries for sustainable livelihoods in an objective and transparent manner. Women, youth and the extreme poor will be prioritized for the livelihood grants under the graduation programme. The project will be implemented in a manner that will be sensitive to their constraints and will encourage their participation.

4. The project will benefit small ruminant holders nationwide through support for policy engagement and institutional strengthening of Ministry of Agriculture to support small ruminant farmers. In its policy engagement, the project will focus on incorporating the perspective of poor smallholder women and men farmers and ensure that their interests are promoted. The participation of women and youth will be carefully monitored throughout the implementation process during project supervision as well as through RIMS reporting. Gender disaggregated data will be included in the RIMS reporting. The poverty targeting and gender checklists are attached to Annexex 12.1 and 12.2.


5. IFAD outlined its strategy for private-sector development and partnership in April 2005 and further refined it in 2011. IFAD intends to deepen its engagement with a range of private sector providers with the aim of creating ancillary support services for the smallholder such as dissemination of the improved breeds, grants and cost sharing for improvement of animal feed.

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137 Private-Sector Strategy. Deepening IFAD’s engagement with the private sector, IFAD, February 2012.
silage preparation and fodder production. Elite private farmers, agriculture cooperatives and private entrepreneurs will be encouraged to partner with the small-holders in the production of improved feed and breed programmes. The development and implementation of the Genetic Identification programme of the “Awassi” Jo will be implemented in close partnership with the smallholders. This is in recognition of the fact that unless the smallholder ruminant producer is involved, this activity will not be taken to scale. SIGHT design is in full accord with this strategy. The project will support emerging income generating activities among the low-income communities and refugees and take them to a new level and transfer into businesses that will be sustainable in the long-term.

D. Mainstreaming Nutrition-Sensitive Agriculture at IFAD

6. IFAD has developed an Action Plan 2016-2018 for Mainstreaming Nutrition Sensitive Agriculture in 21015. The rationale behind its inclusion is the realisation that poor nutrition is a significant determinant of poverty. Over their lifetimes, malnourished individuals can earn 10% less than well-nourished ones. Good nutrition is thus not just an outcome of economic growth and social development, but an essential input as well. Investing in nutrition through agriculture is not just a social good, but it is a sound development policy and good economics. The IFAD plan was designed keeping in mind the growing importance of improving nutrition and an attempt for greater emphasis on integrating nutrition into its work. The plan of action serves to support and guide this commitment during the Tenth Replenishment of IFAD’s Resources. The World Health Organization (WHO) categorizes Jordan, as a country in early nutrition transition, whereby widespread micronutrient deficiencies and moderate levels of undernutrition in specific populations and age groups exist along with moderate overweight and obesity.138 The prolonged crisis situation in Syria increases the burden on the health system and undermines food security. The SIGHT project therefore, has identified strategic points of intervention in the production, food and livelihood system. To ensure that changes in production result in changes in consumption, the project will include nutrition awareness will be included in the life skills training which will be delivered as part of the Graduation packages. The project will also link up with the Nutrition Working Group of Donors which has prepared the Nutrition Response Interventions for Syrian Refugees and Vulnerable Host Community in Jordan 2014 – 2015 which outlines actions to be taken to address the nutrition needs of Syrian refugees and the agencies that will be responsible for interventions in the different governorates.


7. The design of the SIGHT Project is fully compliant with IFAD Rural Finance Policy and the IFAD Decision Tools for Rural Finance including its six guiding principles namely: (i) support access to a variety of financial services; (ii) promote a wide range of financial institutions, models and delivery channels; (iii) support demand-driven and innovative approaches; (iv) encourage – in collaboration with private sector partners – market-based approaches that strengthen rural financial markets, avoid distortions in the financial sector and leverage IFAD’s resources; (v) develop and support long-term strategies focusing on sustainability and poverty outreach; and (vi) participate in policy dialogues that promote an enabling environment for rural finance. The SIGHT project will implement these principles at the micro and meso levels. At the micro level, SIGHT will work with mainstream, diverse retail financial institutions (banks and MFIs) that will be providing access to financial services to rural low-income people at market-based interest rates and other conditions. These financial institutions will get access to affordable funding and technical assistance to be able to develop and offer new agricultural and rural finance products that will then become an integral part of their regular offering. The project will additionally focus on the outreach to the unbanked rural poor and work with them to develop

and formalize their income generating activities to make them sustainable in the long term and eventually link these beneficiaries with sources of formal finance and thus increase financial inclusion. The Project will also work at the meso level by launching a Lending Facility for Rural Businesses through a professional wholesale lending facility of the Central Bank of Jordan. By providing a small amount of the credit line, the Project recognizes that liquidity is not the main constraint facing financial institutions in Jordan, and the objective therefore will be to catalyze the development of rural and agricultural lending in the country, and by demonstrating its viability, leverage additional resources – both international and domestic – for this purpose.

F. Social Environmental and Climate Assessment Review Note

8. The design mission reviewed the Social Environmental and Climate Assessment Procedures to determine the status of the SIGHT with respect to its requirements. The proposed project will enhance social cohesion due to the strengthening of the CDAs and Agriculture Cooperatives and opportunities for greater interaction.

9. The proposed Project will contribute to environmental conservation and sustainability because of its emphasis on making the new lands more productive and sustainable. The proposed Project will strictly follow the existing environmental laws and regulations applicable in the country and represents an environmentally friendly approach to using the natural resource base in the country. The project’s emphasis on enhancing small ruminant productivity rather than increasing livestock flock, breed and nutrition improvement, strengthening traceability and quarantine systems in the country are all aspects that will contribute to good environmental practices. The introduction of improved management of rangelands and introduction of native species that are palatable in collaboration with the community and training them to better manage these fragile ecosystems will contribute to development of effective models for rangeland management and regeneration. SIGHT is therefore classified in Category “B” according to IFAD’s Administrative Procedures for Environmental Assessment. The classification is based on the available information gathered during the field visits, on-site assessment and discussions with the MoA, NCARE and smallholder farmers in the target area. Further details are given in the Social Environmental and Climate Assessment Procedures Review Note attached as Annex 12.3.
### Annex 12.1: IFAD’s Targeting Policy – Checklist for Design

<table>
<thead>
<tr>
<th></th>
<th>DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the main target group - those expected to benefit most- correspond to IFAD’s target group as defined by the Targeting Policy (poorer households and food insecure)?</td>
<td>YES. THE MAIN TARGET GROUP FOR SIGHT IS SMALL-HOLDER FARMERS OF SMALL RUMINANTS AND POOR, FOOD INSECURE SYRIAN REFUGEES AND JORDANIANS</td>
</tr>
<tr>
<td>2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences? (matrix on target group characteristics completed?)</td>
<td>YES – TARGET GROUP CHARACTERISTICS HAVE BEEN EXHAUSTIVELY DESCRIBED IN APPENDIX 2</td>
</tr>
<tr>
<td>3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence? (matrix on analysis of project components and activities by principal beneficiary groups completed?)</td>
<td>YES - EVIDENCE OF INTEREST IS BASED ON CONSULTATIONS WITH THE TARGET GROUP DURING FIELD VISITS. DETAILS OF ACTIVITIES FOR PROJECT BENEFICIARIES ARE PROIDED IN ANNEX 2.</td>
</tr>
<tr>
<td>4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, involving some or all of the following measures and methods:</td>
<td>SIGHT WILL BE IMPLEMENTED IN THE SIX GOVERNORATES OF MAFRAQ, IRBID, JERASH, AJLOUN, MADABA AND THE OUTSKIRTS OF AMMAN THE SELECTION OF THESE GOVERNORATES IS BASED ON THE FOLLOWING CRITERIA: (I) THE SIZE OF THE SMALL RUMINANT POPULATION, (II) NUMBER OF HOUSEHOLDS INVOLVED IN LIVESTOCK FARMING, (III) POVERTY RATE AND (IV) CONCENTRATION OF SYRIAN REFUGEE POPULATION.</td>
</tr>
<tr>
<td>4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or programmes, geographic areas (and within these, communities) with high concentrations of poor people</td>
<td>YES</td>
</tr>
<tr>
<td>4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households</td>
<td>YES</td>
</tr>
<tr>
<td>4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups</td>
<td>YES</td>
</tr>
<tr>
<td>4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power</td>
<td>YES</td>
</tr>
<tr>
<td>4.5 Enabling measures –to strengthen stakeholders’ and partners’ attitude and commitment to poverty targeting, gender equality and women’s empowerment, including policy dialogue, awareness-raising and capacity-building</td>
<td>YES</td>
</tr>
</tbody>
</table>
### 4.6 Attention to procedural measures - that could militate against participation by the intended target groups

**YES**

### 4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers

**YES**

### 5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?

**YES**
### Annex 12.2: IFAD’s Key Features of Gender Sensitive Design and Implementation

<table>
<thead>
<tr>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women’s participation.</td>
</tr>
<tr>
<td>Yes - the project will be sensitive to arrangements required to enable women to participate – such as organizing women only training in small ruminant farming in areas where there are restrictions on mixed gatherings, arranging training at village or municipality level to accommodate women’s time constraints or providing transport allowance.</td>
</tr>
<tr>
<td>2. The project design report articulates – or the project implements – actions with aim to:</td>
</tr>
<tr>
<td>• Expand women’s economic empowerment through access to and control over productive and household assets;</td>
</tr>
<tr>
<td>The project addresses women’s economic empowerment principally by aiming to increase income through capacity building and extension services for increased productivity of small ruminants and graduation packages for sustainable livelihoods. Some women will also benefit from collecting medicinal plants from protected grasslands and microloans for on-farm and off-farm enterprises.</td>
</tr>
<tr>
<td>• Strengthen women’s decision-making role in the household and community, and their representation in membership and leadership of local institutions;</td>
</tr>
<tr>
<td>Yes, insofar as increase in expertise, income and inclusion in capacity building for small ruminant management impacts status in the household. Women will be represented on the stakeholder forums and some women’s cooperatives will be strengthened through using them as a vehicle for project activities.</td>
</tr>
<tr>
<td>• Achieve a reduced workload and an equitable workload balance between women and men.</td>
</tr>
<tr>
<td>In so far as reducing workload through strategizing on how to mobilize other people in the family to help in house work will included in women’s empowerment training given as part of the graduation package.</td>
</tr>
<tr>
<td>3. The project design report includes one paragraph in the targeting section that explains what the project will deliver from a gender perspective.</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant project components.</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>5. The design document describes - and the project implements - operational measures to ensure gender-equitable participation in, and benefit from, project activities. These will generally include:</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>5.1 Allocating adequate human and financial resources to implement the gender strategy</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>5.2 Ensuring and supporting women’s active participation in project-related decision-making bodies and committees</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Requirement</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women’s empowerment concerns</td>
</tr>
<tr>
<td>5.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women’s mobility is limited</td>
</tr>
<tr>
<td>5.5 Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue</td>
</tr>
<tr>
<td>6. The project’s logical framework, M&amp;E, MiS and learning systems specify in design – and project M&amp;E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women’s empowerment.</td>
</tr>
</tbody>
</table>
Annex 12.3: SECAP Review Note – Jordan

1. Major landscape characteristics and Issues (Social, natural resources, and climate)

1.1. Socio-cultural context

Jordan is located between 29° 11’ to 33° 22’ north, and 34° 19’ to 39° 18’ east, with an area of approximately 90 km2. Located at the heart of the Middle East, Jordan is a middle-income county shaped by its geography, history, geopolitics and scarcity in natural resources. The country has a total population of approx. 6.388 million which has grown as result of the Syrian Refugee influx.

The contribution of agriculture to GDP has declined in relative terms from 20% in 1974 to less than 2.9% in 2011, while its contribution in absolute terms has increased (e.g. from JD 57 million in 1974 to JD 598.3 million in 2011 (source: MoA and Central Bank of Jordan periodic reports). In keeping with the Jordan Economic Growth Plan (JEGP) 2018–2022 to recapture the growth momentum and assist the country in achieving a 5% growth rate in GDP, the Government is committed to growing the agriculture sector. The importance of the agricultural sector stems from the fact that it is not only the major source of food items especially dairy products, fruits and vegetables, but also one of the sources of hard currencies originated from exports. Within the agriculture sector, the livestock sector constitutes the major share of agriculture GDP (55%) that contributes significantly to the national income from exports and is critical for food security and poverty alleviation. The small ruminant sector constitutes 32% of the livestock sector and is the most important sector for the poor rural communities in the Badia. Approximately 25% of Jordan’s poor rely on agriculture.

Jordan is a food deficit country, and is among the seven countries identified as most vulnerable to the impact of high food prices. An analysis of the self-sufficiency ratio for meat products in the country indicates that the overall self-sufficiency ratio for all meats is low with the lowest ratios for mutton and beef. Animals and animal products amount to 39% of the total value of imported foods. The value of imports is further expected to increase due to the increases in population and increase in demand for meat.

Gender & Youth. The overall unemployment rate in the country is reported to be 13% with widespread under-employment. The service sector has the largest share of employment at 78% followed by 20% for industry and only 2% in agriculture. However, this number does not include casual agricultural labour, home-based income-generating activities and small-scale farming and livestock keeping (mostly small ruminants), which are mainly run by women. Thirty percent of women are occupied in the agricultural sector. Unemployment rates are far higher for women than for men (22% versus 10%). Youth unemployment is over 30% for 20 to 24-year-olds. In the labour sector, Syrians are seemingly supplanting local labour and wages are being bid downwards. Unemployment amongst Jordanians in areas with high concentrations of Syrian refugees, and in northern Governorates in particular, rose from 14.5% to 22.1% between 2011 and 2014 (ILO).

Syrian refugees. The Syrian crisis has severely disrupted agriculture and food trade in the region, with negative consequences for farmers and those involved in agribusiness support activities. The country is now hosting 1.4 million Syrians, of whom 646,700 are refugees. At least 85% of all refugees live outside camps with a significant proportion classified as extremely vulnerable. This influx has resulted in huge pressure on basic infrastructure, services and resources and impacts heavily on Jordan’s public finances, increasing government expenditure on subsidies, public services and security while further compounding the negative economic consequences of regional instability.
Land ownership. Land can be owned individually or by groups in Jordan. The state claims ownership over all uncultivated or unbuilt-upon land, including pastoral areas. The classifications of land tenure include: (i) owned land (mulk); (ii) communal land held by peasant farmers and periodically redistributed (musha’a); (iii) religious land (waqf); and (iv) state land, which can be granted in use rights to the public (miri).

Although pastoral land is also claimed as government property, traditionally the land is considered tribal domain with full rights of use by the tribe. This creates land use conflicts and also leads to mismanagement of the natural resources leading to overgrazing and desertification. Since ancient times, Bedouin tribes have practiced a traditional land management system expressed by the term “dirah,” the area throughout which a group migrated, that included pasture and some cultivated zones. They used a grazing system known as “Hima” in which good forage within a tribe’s territories was sought out while heavily grazed land was allowed to lie fallow to recover. Within the dirah, certain good grazing areas, such as wadis and marabs (wadi fluvial outwash zones that are typically well vegetated) traditionally “belong to” individual families and clans whose property rights are recognised and respected by others.

From Agriculture Law perspective, there is no “tribal lands or tribal fronts” as claimed by local communities. The majority of rangelands in Jordan are treasury lands where the right of use is guaranteed or secured for local communities but the ownership of these lands is not granted. In reality, the tribes still claim that these lands are tribal lands and should be solely used by certain tribes. Central governments are reluctant to assign sufficient responsibility to pastoral communities to allow them exercise full land tenure privileges. Without effective local control over range resources, there is little incentive for pastoral communities to accept management recommendations or technological interventions that increase resource productivity. Some form of pastoral cooperatives is the contemporary substitute for the traditional tribal authority that could prevent flocks from outside the community from trespassing onto prime grazing land, but these cooperatives are often ineffective.

The lesson learned from the issue of land tenure is that herders prefer to graze their flocks on areas without any disputes on land tenure and this issue is one of the entry points to promote the idea of Hima or community-management of grazing lands. Four alternatives are suggested to stimulate better resource management (i) development of effective pastoral cooperatives, (ii) the redefinition of pastoral rights, (iii) re-introduction of the hima concept, and (iv) the development and improvement of the rangelands through capacity development.

1.2. Natural resources and NRM

The climate of Jordan varies from dry- and sub-humid Mediterranean in the western highlands, with rainfall between 300-650 mm, to the desert conditions with precipitation between 50-150 mm in the Badia region. Most of the country (90%) is arid to semi-arid, characterized by a very low annual precipitation averaging less than 220 mm. The rainy season extends from October to May, with about 80% precipitation occurring between December and March. The average annual temperature is 18.6 °C, which varies between 13 °C in the southern Badia Region to 28 °C in Aqaba at the southern coastal area. The minimum temperature varies from 5.6 °C in the eastern region to 19.8 in the western region. The average maximum temperature is 25.3 °C, ranging from 18.1 °C to 31.3 °C.

Jordan is divided into three main regions (FAO, 2012): (i) the about 3,000 km\(^2\) of Ghor (Lowlands) Region, with a length of about 400 km (width of 15 km in the north expanding gradually to about 30 km in the south) ranging from 197 m below MSL in the north to more than 400 m below MSL at the Dead Sea. Average annual rainfall varies from 280 mm at Deir-Alla in the north to 71 mm at Ghor Safi in the south; (ii) the about 16,900 km\(^2\) of Highlands and Marginal Steppes Region that extends from the Yarmouk River in the north to Ras El-Naqab in the south, formed by a set of elevations (from 1,150 m above MSL in the north to about 1,365 m above MSL in the south, with some peaks exceeding 1,500 m above MSL such as El-Qurain) and interspersed valleys, such as Zerqa River, Wadi Mujib and Wadi El-Hasa. This region has a typical Mediterranean climate-type, with the maximum annual rainfall for Jordan (570 mm) that occurs at the upper northern Highlands Region of Ras Muneef; (iii) the about 70,000 km\(^2\) of Badia and Desert Region, with an elevation of about 600-750 m above MSL (approx. 80% of the country), and an annual rainfall ranging from 28-100 mm. Most of the target governorates - Irbid, Jerash, Ajloun, Madaba and the outskirts of Amman – largely coincide with the Highlands and Marginal Steppes Region. In the case of Mafraq, the western zone belongs to this region, while the eastern zone is part of Badia desert.

Oak and pine forests and woodlands are found primarily in the highlands rainfall zone of Aljoun, Jarash (these 2 governorates have 20-30% forest coverage), and Irbid. They have been altered by overgrazing, over-harvesting of wood and plants, and conversion into agriculture land. An emerging key priority is the protection of forests in watersheds in order to reduce soil erosion. There are 4 national forest reserves totalling 35,000 ha in Jordan (Aljoun, Dana, Dibben and Yarmouk), which are managed by the RSCN together with the MoA, Forestry Department and MoE. Steppe vegetation, dominated by *Retama raetam*, *Ziziphus lotus*, *Z. nummulari*, *Pistacia atlantica*, *Anabasis syriaca* and *Artemisia herba-alba*, occur in the surroundings of the northern highlands in all target governorates. Overgrazing has significantly reduced vegetation cover and species diversity in the steppe rangelands. The central and eastern part of Mafraq governorate is characterized by desert vegetation.

Jordan is among the poorest countries in the world on the basis of per capita water availability, with only 147 m\(^3\) per person per year in 2010, which is far below the international water poverty line of 500 m\(^3\).\(^{141}\) Water levels in the main aquifers have been declining from over-exploitation with some aquifers showing considerable deterioration in water quality due to salinity. Currently total uses exceed the renewable supply (less than 130 m\(^3\) of renewable water resources per person per year).

\(^{141}\) Al Karadsheh, E et al. (2012) Land Degradation in Jordan – Review of Knowledge Resources. ICARDA.


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**Figure 1. Rainfall isohyets in Jordan**

[Diagram showing rainfall isohyets in Jordan]
The Jordan River watershed is in the Jordan Highlands of Irbid, Jerash, Ajloun, and outskirts of Amman. It has the largest water yield in the region and provides most of the usable surface-water supply. The largest tributary to the Jordan River is the Yarmouk River, followed by the Zarqa River, whose flows have dropped significantly due to the construction of dams (Yarmouk dams in Syria) and heavy abstraction of groundwater. The Dead Sea watershed includes streams with headwaters in the Jordan Highlands of Madaba. In Ma'afraq governorate, Azraq and Hammad watersheds drain eastwards into desert mudflats. Surface waters come as floods from wadis pouring into the depression, which either evaporate or infiltrate to the underlying aquifers.

Over the past two decades Jordan’s Government supported by donors has made substantial efforts to convince agricultural producers to use treated wastewater as an additional resource, by ensuring that treatment levels comply with agricultural re-use standards, and convince consumers of the safety of food produced from reclaimed water blended with freshwater. The use of treated wastewater in the Northern and Middle Jordan Valley has increased from about 40% in 2000 to about 56% in 2010. By 2015, treated wastewater was expected to increase by an additional 76 MCM/year, bringing the total wastewater available for reuse to about 180 MCM/year, most of which will be used to irrigate fruits and vegetables, other food crops, and tree crops, with a small allocation to support forage and fodder production for livestock. Moreover, huge investments from public and private sectors in the supply side of water are manifested in the development of public desalination facilities for municipal use and micro and small private desalination facilities for drinking water and agricultural use.

Agriculture and livestock resources

Analysis of land use/cover map showed that agricultural areas cover about 5% of the country’s total land. Rangelands cover between 80-90% of the country, depending on definition, including much of desert, the steppe and highland regions. Irrigation is taking place in Jordan Valley, highlands and desert areas, while 90% of irrigated agriculture is taking place in the northern and southern highlands. Important irrigated agriculture is also taking place on the basalt plateau soils of northern Jordan, in Ma'afraq governorate. Generally, the annual rainfall constraints of the country do not support good rainfed agriculture, except for few areas in the northern and western highlands with more than 250 mm, although significant production of cereals occur in some areas where rainfall is between 200 and 250 mm. The rainfed sector is formed by fruit trees, field crops and to a less extent the vegetables. Fruit tree crops dominate the hilly and steep sloping lands of the western part of the highland plateau (e.g. western parts of both Yarmouk and Zarqa basins). The main threat to rainfed cultivation in Jordan is urban expansion and land fragmentation, in addition to the frequent droughts.

Livestock is a major source of income for local communities in this target governorates. Goat and sheep owners have traditionally moved according to the availability of fodder and water between eastern grazing regions (during the winter and spring seasons) and western farming and mountainous regions to graze on grass and crop by-products (during summer and autumn seasons). Officially the rangelands (especially the Badia) are state-owned but in practice tribal Bedouins control and claim ownership. Fifty years ago, nomadic Bedouins raised their livestock with no regard to political borders, venturing into Jordan, Syria, and Saudi Arabia, as well as locations around the Iraqi borders. With all the Bedouins now residing permanently in Jordan, 71% raise their livestock in the northern Badia region. The change to a non-migratory grazing regime has put stress on the land as the Bedouins now keep their livestock year-round in roughly the same place (Al-Tabini et al. 2012). With the elimination of these systems and rights, and the declaration of grazing lands as state-owned land, open for everybody, new land uses became prominent such as overgrazing and early grazing of range plants, ploughing of rangelands to establish ownership and property rights, urbanization, uprooting of bushes for use as fuel wood, arbitrary movement of vehicles, quarries and mining activities. Many of these areas were over-used without consideration to their resource requirements or their productivity. The change in land tenure also discouraged pastoralists and Bedouins to maintain and conserve their resources and lands and control their grazing.

The most common small ruminant production system in the target governorates is the semi-nomadic system, in which flocks depend partially on natural grazing and on crop residue and agricultural by-

products. They move to land adjacent to the field crops, and return to spend the winter around the houses where they survive on the hand feeding given to them over a period extending from 4-6 months. The nomadic system prevails in the eastern Badia region of Mafraq, in which the herds move from one place to another by trucks, looking for grazing or water. The flock depends on natural herbage as their main source of feed, in addition to the hand feeding in winter.

Jordan natural rangelands use to play an important role in covering the livestock feed requirements. Natural rangelands cover feed requirements for a period of 2-3 months without complimentary feeding or 30% of food requirements. The productivity of rangelands is highly dependent on natural factors - rainfall, topography and soil – and anthropogenic factors – overgrazing, rangeland fragmentation and conversion into other uses. The highest productive rangelands are located within the 100-250 mm rainfall zone (steppe grassland and brush), where barley is sometimes cultivated for fodder. Feed unit productivity of rangelands is estimated at 40 kg of dry feed matter per dunum in areas with 100-200 mm of annual rainfall; and 100 kg per dunum in the areas that receive more than 200 mm.

Rangeland protection and development activities started in Jordan in the 1940’s. The first rangeland reserve was established in the Khanasry/Mafraq area in 1946 to protect, improve, and manage rangelands through research and development activities. Currently, there are 34 governmental range reserves divided into 3 categories: Steppe reserves, Desert reserves and Highland reserves covering a total area of about 79,664.2 ha. Thirteen reserves occur in the target governorates (five reserves in Mafraq, one in Ajloun, four in Amman, and three in Madaba). These reserves are planted, managed and protected by the Rangeland Directorate. The range management specialists determine that the grazing capacity will allow neighbouring pastoral groups to use the reserves for certain periods of time and with a specific number of animals for grazing; they do usually charge them fees on head–basis, (0.5/fils per head). Government's introduction of palatable shrubs in rangelands had the purpose of reducing land degradation, soil erosion and enhancing feed availability. Rangeland reserves provide a multitude of ecosystem services including improvements in livestock production, conservation of biodiversity, maintaining habitat and connectivity for fauna and flora, increases the moisture-holding capacity of the soil, protecting hydrological cycles, capturing atmospheric carbon, and reinforcing local culture. Rangeland reserves can therefore contribute to poverty reduction and economic growth as well as protection of habitat and conservation of endangered species, and they have benefits to people outside their boundaries. However, due to poor legislation and laws enforcement, reserves are threatened by overgrazing, woodcutting, plant collection and illegal hunting.

1.3. Political context

Environmental planning and policy formulation in Jordan includes:

- 1992 National Environmental Strategy (NES), which was the first step to address environmental problems, with specific chapters on agriculture, land management and water resources. This was the basis for Jordan’s signing and ratification of the UNCCD in 1996.
- 1995 National Environmental Action Plan, which identified environmental priorities and needs related to land degradation and desertification.
- 1998 Water Strategy Policy adopted by the M. of Water and Irrigation (MWI) with the aim to improve water resource management.
- 2002 National Agenda 21, prepared under the supervision of the MoE, which proposed several strategic objectives to combat desertification in relation to rangeland management and agriculture land use.
- National Strategy for Agriculture Development (NSAD) for the decade 2002-2010, which focused on sustainable agriculture development and protection of natural resources, and identified a number of environmental benefits to be achieved through: (i) conservation of land, water, and natural vegetation through sustainable agriculture production; (ii) agro-

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143 Ibid.
144 1 dunum = 0.1 hectare.
biodiversity conservation in parallel to sustainable agriculture development; (iii) improvement of climate-smart technologies and managerial capacities of the agriculture sector; (iv) halting unplanned urban expansion on agriculture land; (v) controlling soil erosion in steep mountainous areas through improved agriculture practices and water conservation measures.

- The Updated National rangeland Strategy (2013) has the following short- and long-term objectives: (i) stop and reverse rangeland degradation and desertification trends; (ii) increase rangelands’ productivity and fodder production for a sustainable livestock management; (iii) improve and conserve the rangeland environment; (iv) improve the socio-economic conditions of rangeland inhabitants through animal production improvement programs (intensive breeding techniques to regulate stocking rates); and rangeland development and management, promoting gender equality and empowerment; and (v) improve the governance systems for rangelands, tenure rights, legislation development, institutional development with financial and human resources.

- 2007 National Strategy and Action Plan for Drought Mitigation, which only suggests a detailed road map with a set of recommendations for the development of such a strategy.

- Jordan Poverty Reduction Strategy (PRS) 2013-2020. The PRS considers most of the relevant policies and strategies related to the National Strategy to Combat Desertification that was adopted in 2006 and included main programs: (i) Desertification Information System; (ii) Drought Prediction and Desertification Control; (iii) Capacity Building and Institutional Development, (iv) Restoration of Degraded Ecosystems of Rangelands and Forests; and (v) Watershed Management.

- The aligned National Action Plan (NAP) to Combat Desertification in Jordan 2015-2020 consists of a vision (“Productive and sustainable use and management of land resources to support poverty reduction, environmental sustainability and national economy”), a monitoring program on desertification, land degradation and drought (DLDD) and sustainable land management (SLM), and an integrated financial plan.

- Jordan’s “Water for Life” Strategy 2008-2022 highlights drought management and adaptation to climate change as future challenges to be addressed through proper policies and regulations. Despite being clear on the water sector vision and adopting an Integrated Water Resources Management approach, the strategy lacks provisions to address climate change issues and its magnified impact coupled with water scarcity.

- Climate change issues are expected to be integrated in the upcoming Poverty Reduction Strategy. The 2014 Third National Communication (TNC) to the UNFCCC, assessed climate change impacts and CC vulnerability of the agriculture and water sectors, and proposed priority adaptation measures to increase the adaptive capacity of the most vulnerable rural population and increase social and ecological resilience. The TNC analysed in detail climate change impacts and adaptation needs in three case study areas - Jerash, Ajloun, and Balsa governorates. The “Program for Mainstreaming Gender in Climate Change Effort in Jordan” was prepared in 2010 (MoE, IUCN and GGCA). The document was endorsed by the GoJ and presented to the international community as the official stand of Jordan on the issue of gender and climate change. The document is also endorsed by the Women’s National Committee and adopted as part of the Committee’s strategy.

1.4. Institutional Context

The main public institutions dealing with agriculture, natural resource management and environmental risk issues in Jordan include:

- Ministry of Agriculture (MoA). The Directorate of Rangelands and Badia Development oversees the sustainable development and monitoring of rangelands, supports livestock-related actors in terms of capacity development and improved socio-economic conditions, and take care of the enforcement of laws and regulations. The Forestry Department has a major role in the conservation and management of forest and rangeland ecosystems, and law enforcement.

- National Centre for Agriculture Research and Extension (NCARE), which is the leading institution in land degradation that works under the umbrella of the MoA. Many programmes
and projects on sustainable agriculture and NRM, land restoration, water conservation and harvesting, and livelihood improvement were conducted in collaboration with ICARDA, IFAD, OPEC, UNDP, USAID and GIZ.

- Ministry of Water and Irrigation (MWI), the most important institution dealing with water issues.
- Higher Agricultural Council.
- Ministry of Planning and International Cooperation (MoPIC), which plays a critical role in reviewing all plans developed by MoA and MoE, and coordinating with potential funding agencies.
- M. of Municipalities, responsible for land use planning.
- M. of Tourism and Antiquities. Promotes ecotourism to benefit pastoralist communities.
- The Hashemite Fund for Badia Development, responsible for community engagement, livelihoods enhancement, and management of conflict resolution over rangeland and grazing rights.
- Royal Administration of Environment Protection (RANGERS), which leads on law enforcement.
- Agriculture Credit Corporation.
- Ministry of Environment (MoE), responsible for the NAP for combating desertification, and the UNFCCC national communication.
- Higher Council for Science and Technology/ Ba'ida Center.

The civil society organizations include: Farmers Organizations/ Union, Micro Credit Facilities, Universities and Research Centres. There are several non-governmental organizations (NGOs) that play a role in environmental protection activities. Some of these have developed several programs and projects such as:

- The Royal Society for Conservation of Nature (RSCN), managing protected areas.
- IUCN-ROWA, which contributes to the revival of Hima, rangelands restoration, ecosystem services to improve livelihoods, gender equality.
- The Jordan Environment Society and the Desertification Combating Society.
- The Noor El-Hussein Foundation.
- The Jordan Valley Foundation who is making real impact among land users on the conservation of natural ecosystems, combating land degradation and promotion of alternative livelihoods.
- The Royal Botanic Garden (RBG) who addresses food security issues.

The main international and regional agencies active in Jordan on NRM and land degradation issues are:

- United Nations Agencies (mainly FAO and UNDP).
- International Centre for Agricultural Research in Dry Lands (ICARDA).
- World Bank and IFAD.
- Bilateral Agencies (e.g. USAID, GTZ, DANIDA).

Jordan is also a member of the Sub Regional Action Programme to Combat Desertification in West Asia region (SRAP-WA) and benefits from effective sub-regional cooperation in addressing common problems and in promoting experience and innovation sharing between stakeholders, particularly on two key issues common to the countries of the region, namely sustainable management of water resources and vegetation cover of forest and rangelands. As a result of such regional cooperation, a project database on water resources was developed by the International Centre for Agricultural Research in the Dry Areas (ICARDA) and another on vegetation cover was developed by the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD).
1.5. Key Issues

1.5.1. Main Threats

The interaction between anthropogenic maladaptive practices (e.g. overgrazing, lack of seasonal rotation and restoration of degraded soils) and climate change (namely the higher frequency and intensity of drought and climate-related extreme events) has contributed to the degradation of pastures and rangelands. The ability of livestock farmers to maximize the use of their pastures is constrained by many problems, including the lack of technical knowledge of small livestock holders, poor governance and inefficient pasture management, pasture degradation, and lack of access to assets and infrastructure - all of this further exacerbated by climate change.

A. Policy failures, poor governance, and land tenure problems

The present land tenure system is the result of a long conflict between pastoral groups and the administration, and it is the main reason for the destruction of natural vegetation in the steppe and desert rangelands. Rangelands productivity began to deteriorate in the 1950s when the rangeland protection system (Hima) and the traditional grazing rights were cancelled, and when the declaration of rangelands as state-owned land, open to all, and to new land uses, was made. This has led to over-grazing and a real lack of incentive to the livestock owners and the Badia population to protect these rangelands. This deterioration was accompanied by an increase in the number of grazing animals, which exceeded the rangelands carrying capacity and led to the destruction of the plant cover and the decrease of rangeland productive capacity by no less than 60-80%. Moreover, thanks to modern transportation means available to herders, the construction of water points and movement of trucks with water and animals to less accessible grazing areas has led to overgrazing and an accelerated degradation of rangelands.

The policy of subsidizing prices for imported livestock feed has encouraged livestock herders to keep large number of animals that exceed the carrying capacity of the rangeland (Ben Salem & Smith, 2008). However, political changes on feed subsidies (e.g. feed subsidy was removed between 1997-2000 and re-introduced in 2001) and volatile prices of imported food and energy are impacting governmental subsidies for barley and wheat bran (main imported fodder resources) and the food security of herders excessively depending on subsidized feed.

B. Land degradation

Several surveys and studies indicate that Jordan’s land is at the threat of high rates of degradation. A WB study (2004) estimated that the cost of environmental degradation in Jordan corresponded to 3.1% of GDP annually, with a total JD 205 M for five sectors (0.46% of GDP for rangeland degradation; 0.14% of GDP for soil salinization). The main causing factors of land degradation are overgrazing, over-exploitation of vegetative cover, unsustainable agriculture and water management practices, and habitat destruction due to conversion into agriculture and urban spread. Land degradation is confirmed by the following observations:

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149 Ibid.
Overgrazing and fuel wood gathering have led to rangeland loss and lower quality of rangelands, with the expansion of noxious plants, the loss of palatable species, the conversion of large perennial pastureland into annual pastures, and the reduction of productivity (e.g. edible dry matter per hectare decreased from 80 kg/ha in 1990 to 40 kg/ha in 2010 in Badia region, which represent 2 kg decrease in dry biomass/ha/yr over the 20 years period, in most cases current production does not exceeds 1/6 to 1/3 of the potential productivity). The contribution of rangelands in meeting the needs of the livestock has decreased from about 50-60% of animal feed over a period of 6-8 months, to about 20-25% over a period of 3-4 months.

Large areas of steppe vegetation were destroyed due to the expansion of tillage into the steppe lands, which speeded up with the introduction of the tractor on a major scale in the early 1950s, and favoured by land ownership and territorial conflicts among the Bedu (about 20,000 ha of steppe grasslands were ploughed and planted annually with barley).

Annual soil loss due to water erosion amounts to 200 t/ha in the mountainous areas.

Poor irrigation techniques have resulted in salinization in large areas.

Fertile agricultural land around major cities has been lost to urbanization, industrial establishments and transportation infrastructure. One result is that the food gap in the region increased from USD 10,700 million in 1993 to USD 11,800 million in 1994 (FAO/UNESCWA 1994; UNESCWA 1997).

C. Population pressure

The problem of the uncontrolled population growth in Jordan, accelerated by the political instability in the neighbouring countries, had placed additional burdens on the country’s limited resources. Jordan had witnessed a rapid population growth during the period 1950-2010, mainly due to West Bank and Iraqi refugees, and the return of Jordan labour following the 1990 Gulf War. Current crisis with the Syrian refugees will increase the stress on the use of natural resources, and lowering government ability to improve life standards of certain sectors of the population.

Considering the current rate of population growth, future projections showed that Jordan’s population will reach 10.6 and 17.0 million by years 2030 and 2050, respectively. These figures were based on the population of 2010, including the Iraqi refugees and with the assumption of no new waves of refugees from the neighbouring countries. Excluding the number of refugees from these calculations, the figures of populations will reach 8.9 and 14.4 by years 2030 and 2050, respectively.

Examples of results of land use changes due to population growth since the 1970s in two target governorates are: in Amman-Zarqa urban areas were nearly doubled every 20 years at the expense of rainfed areas. In Irbid, rainfed areas were either urbanized or changed into non-cultivated areas. In Ajloun, rainfed areas increased at the expense of forests, causing land degradation in the high rainfall zone in north-western Jordan.

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150 Ibid: The botanical composition of the natural vegetation was evaluated in Muwaqar Research Station (average rainfall 150 mm) during 1986-1987. During 1986 the number of species recorded was 52, belonging to 46 genera of 19 families, while in 1987 and due to the protection of the study site 150 species belonging to 120 genera of 31 families were recorded. This Station compared soil seed bank characteristics in relation to protected rangeland (PRL), uncontrolled grazing (GRL), and continuous cultivation (CRL), resulting an average number of 15066, 5270 and 2403 seeds/m² respectively.


153 Ibid.
D. Gender issues

A gender-based employment gap exists in Jordan as male workers exceed 1 million, compared to little over 200,000 female workers (DOS 2011). Over 90% of pastoralist and agricultural households in Jordan are supported by the male head of household, while women have unaccounted roles through essential contribution in agriculture, animal husbandry and rural enterprises. In 2010, the number of women working as hired agriculture labour was very low compared to the total paid one, as 89.4% were male and 10.6% female. The composition of its force in the agricultural census of 2007 shows the predominant form of agricultural was family labour, with 77% of the total in rain-fed agriculture being unpaid. While children under 15 years also play a minor role in family farm labour.

The relation of desertification, land degradation and drought (DLDD) with gender and poverty is due to the dependency of such vulnerable groups (water springs, rangelands and biodiversity) that could be threatened by DLDD. Distinct gender roles within Bedouin and rural communities largely undermine the indigenous knowledge and skills of local women. Decision making and management on the household level and community level are mainly governed by the males in contrast with the fact that it is females who are in direct contact with natural resources use and processing either for livestock feeding or meeting family needs while women play a vital role in providing the family with part of the income and sometimes generating income from other non-traditional means such as cultivating and processing medicinal and herbal plants.

E. Water over-use

The scarcity of water is considered to be the single most important constraint to the country’s growth with demand far exceeding renewable supply. The consumption deficit is made up by overdrawing highland aquifers, resulting in a lowered water table in many basins and declining water quality in others. The gap between demand and supply is often dealt with by rationing to the domestic and the agricultural sectors through rotating supply, and by providing intermittent services during the dry months (June–August). Available water resources continue to fall with population growth and are projected to drop to about 90m3 per capita per annum by 2025, which will place Jordan in the category of absolute water shortage conditions.

Irrigation water is heavily subsidized, with very low tariffs for surface water deliveries to the Jordan Valley, and also very low tariffs and small restrictions on over-abstraction of groundwater in the Highlands. This over-abstraction in the Highlands is anticipated to be unsustainable and will terminate at different rates in the 11 over-exploited groundwater basins as the supply is exhausted, saline water is found, or pumping costs exceed financially supportable levels on private farms.

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F. Climate change

The climate projections provided by the Third National Communication (TNC) of Jordan to the UNFCCC (2014), can be summarized as follows:

- A rise in mean temperature throughout the country is extremely likely; a maximum increase between 1.8°C (4.5 RCP) and 2.2°C (8.5 RCP) by 2035, between 2.5°C (4.5 RCP) and 3.4°C (8.5 RCP) by 2055, and between 2.8°C (4.5 RCP) and 5.1°C (8.5 RCP) by 2085. The increase will be stronger in the eastern and southern regions according to 8.5 RCP. It is extremely likely that the rise in mean temperature will be higher in summer, and less in winter.

- It is extremely likely that minimum temperatures will have a homogeneous rise of up to 2.4°C (4.5 RCP), with the stronger increase in the north-western part of the Balqa region (up to +5°C). Stronger rise is predicted by 8.5 RCP (3.3°C), especially in the rift and mountain regions, with localize decreases in temperatures up to 2050 in the highlands.

- A homogeneous and gradual rise in maximum temperatures is extremely likely, that could rise between +3 and +5°C.

- The annual precipitation will likely suffer from a significant variability in the next 30-years. The 4.5 RCP predicts an increase in PP up to the year 2055 on the Eastern and Southern Badia regions, and at the Northern and Southern Highlands, while it predicts a decrease for the rest of the country of 20%. The 8.5 RCP predicts a likely decrease all over the country by 2055, except for the northern highlands of Irbid, Tafeeleh and Karak, where it is expected an increase. After 2055, the decrease in PP becomes quite constant and reaches values between -16% and -24% by 2085. The high inter-annual variability between -60 and +85% of the reference model will likely possible by the end of the century, however the overall trend is clearly towards a decrease in PP.

- The 4.5 RCP, projects that precipitation is expected to decrease during summer by nearly 10% by 2050, thus affecting a time of the year where the precipitation values are close to zero. For the other seasons, the decrease is more substantial in 2070, with an important loss during the rainy season (around -20%) in autumn and around 16% in winter. The 8.5 RCP projects a likely decrease of 22% in autumn precipitation by 2055, and a gradual reduction of spring and winter rainfall which reach respectively -16% and -25% by 2085. The occurrence of snow will strongly decrease, which will complicate water management.

- Consecutive dry days are likely to increase over time till the middle of the 21st century, and its likelihood is magnified to more than 30 days for the 2070-2100 period. It is extremely likely the intensification of drought, especially in winter and spring. The potential evapotranspiration (PET) will likely increase up to 2,000 mm and more in the southern region, while in the far eastern frontier will be even more intense.

Table 2: Projected changes in selected climate variables generated by the two used RCPs at country level

<table>
<thead>
<tr>
<th>Year</th>
<th>Precipitation (mm)</th>
<th>Mean Temperature</th>
<th>Maximum Temperature</th>
<th>Minimum Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Medium</td>
<td>Maximum</td>
<td>Reference</td>
</tr>
<tr>
<td>2035</td>
<td>-15.9</td>
<td>-6.2</td>
<td>9.2</td>
<td>-3.0</td>
</tr>
<tr>
<td>2055</td>
<td>-24.2</td>
<td>-15.4</td>
<td>-8.7</td>
<td>-15.4</td>
</tr>
<tr>
<td>2085</td>
<td>-22.5</td>
<td>-13.6</td>
<td>-7.5</td>
<td>-12.0</td>
</tr>
<tr>
<td>2035</td>
<td>0.9</td>
<td>1.2</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>2055</td>
<td>1.6</td>
<td>1.7</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>2085</td>
<td>1.8</td>
<td>2.1</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>2035</td>
<td>1.0</td>
<td>1.1</td>
<td>1.8</td>
<td>1.1</td>
</tr>
<tr>
<td>2055</td>
<td>1.6</td>
<td>1.7</td>
<td>2.5</td>
<td>1.7</td>
</tr>
<tr>
<td>2085</td>
<td>1.7</td>
<td>2.1</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>2035</td>
<td>0.9</td>
<td>1.1</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>2055</td>
<td>1.5</td>
<td>1.7</td>
<td>2.4</td>
<td>1.8</td>
</tr>
<tr>
<td>2085</td>
<td>1.7</td>
<td>2.0</td>
<td>2.8</td>
<td>2.5</td>
</tr>
</tbody>
</table>

156 Representative Concentration Pathways (RCPs) 4.5 and 8.5, are two of the four RCPs greenhouse concentration trajectories adopted by the IPCC for its 5th Assessment Report in 2014. They are used for climate modeling and research, and describe four possible climate futures, all of which are considered possible depending on how much greenhouse gases are emitted in the years to come. TNC (2014).
Drought

Assessment analyses using standardized precipitation index (SPI) and normalized difference vegetation index (NDVI) showed that the country, during the past 35 years, was facing frequent non-uniform cycles of drought/wet periods in an irregular repetitive manner. Drought seasons appear in a random fashion of either short or long life span from one to three consecutive years. From spatial point of view, the SPI analyses suggest existence of two drought extents: local droughts acting on one or more geographical climatic subdivisions of the country (e.g. 1975, 1976, 1978, 1979, 1981, 1982, 1983, 1985, 1986, 1987, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1997, 1998, 2001, 2002, 2003, 2004, and 2005), and national droughts that covered all parts of the country. National droughts are less common but have larger magnitudes and severity levels. For instance, the extreme national drought in 1999/2000 caused the following impacts: (i) 88% reduction of wheat and barley production,

157 TNC, 2914.
158 TNC, 2014.
with an estimated economic loss alone for 2000 of USD 160 million; (ii) loss of livestock herds and decreased production of read meat and milk; (iii) increased dependence on imported fodder campaigns.

### Table 3: Frequency and severity of droughts in Jordan (1961/62-2010/11)

<table>
<thead>
<tr>
<th>Probability</th>
<th>Mild Drought</th>
<th>Moderate Drought</th>
<th>Severe Drought</th>
<th>Extreme Drought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return Period (Years)</td>
<td>14%</td>
<td>8%</td>
<td>16%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Droughts in Jordan act intensively during January, February and March and shift its position with time by alternative migrations from the southern desert parts to northern desert parts and from the eastern desert parts to highlands and JRV at the west. On the other hand, wet seasons may occur at higher magnitudes at October, November and January especially when it occurs at national level. Wet events seem to have alternative migrations from southern deserts to northern highlands and deserts and from JRV and western highlands to middle-eastern deserts. Both drought and wet periods are becoming more extreme with time but lasting for shorter life spans.

Droughts were predicted to become more intensive at the northern and southern deserts with a rainfall reduction factor of 15%, followed by 10% reduction at the Jordan Rift Valley, and finally only 5% at the highlands. The forecasted SPI for the next 30 years suggested the presence of more adverse local drought but less scattered with 3 to 4 years of drought cycles. The model timely scaled few moderate to severe droughts at the years 2018, 2020, 2034 and 2036, and very wet periods at 2019, 2020 and 2032. More intense droughts will be (partly) compensated by rainy years in a context of a general decrease in precipitation. In fact, the overall Climate Change Vulnerability assessment of the Agriculture Sector in Jordan scored as “moderate” the increase frequency of droughts (See Table 4), especially in the highlands that characterize the target governorates, with the exception of the eastern Badia region in Mafraq.

### Vulnerability of the water sector

Scarcity of water resources is one of the major barrier facing sustainable development in Jordan. According to the TNC (2014), the overall CC vulnerability assessment for the water sector in Jordan falls in the categories of high and very high. The impact of reduced precipitation, increased temperatures, drought/dry days and evaporation, will result in less recharge and therefore less replenishment of surface water and groundwater reserves, as well as higher salinization, surface water contamination, soil erosion, desertification, and disappearance of small springs and discharge reduction of major springs. The occurrence of snow will strongly decrease, which will complicate water management.

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161 Ibid.


163 MWI, 2014. In: Third National Communication of Jordan to the UNFCCC.
The increase demand for water in Jordan during the last decades has contributed significantly to reducing per capita shares. The natural growth of economic activities and population increase has been exacerbated by the continuous flow of refugees from Syria in particular, and thus increase the demand for water. Water deficit will continue to grow and the gap between demand and supply will lead to an increase in bulk water supply costs for priority domestic use from average current level of JD 0.35/m$^3$ to JD 0.95-1.10/m$^3$ or more. Per capita water availability is projected to decline from the current low of 106 m$^3$/year to 90 m$^3$/year by 2025, whereas global average is 24,776 m$^3$/year.\textsuperscript{164}

### Vulnerability of the Agriculture Sector

According to the TNC (2014), the overall CC vulnerability assessment for the agriculture sector in Jordan falls in the categories of moderate and high. Poor people in rural areas in Jordan are expected to face the most severe consequences of climate change through disruption of livelihood options that depend on natural resource management. The expected impacts of climate change, particularly reduced agricultural productivity and water availability threatens livelihoods and keeps vulnerable people insecure. An increased temperature, decreased precipitation, increased frequency and intensity of extreme weather events and summer season length has negative impact on crop production, productive and reproductive performance of livestock such as increased incidence of livestock diseases and parasitic infestation, and decreasing trend of feed and fodder resources.

#### Table 4: Overall Climate Change Vulnerability of the Agriculture Sector in Jordan (8.5 RCP)\textsuperscript{165}

<table>
<thead>
<tr>
<th>Climate change hazards</th>
<th>Resulting impact</th>
<th>A. Exposure level</th>
<th>B. Sensitivity level</th>
<th>C. Total impact</th>
<th>D. Adaptive capacity level</th>
<th>E. Overall vulnerability assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift in rainfall season</td>
<td>Decrease in reliable cropping days and crop failure</td>
<td>Moderate (average score = 3.7)</td>
<td>Moderate (average score = 3)</td>
<td>Moderate (average score = 3.35)</td>
<td>Low (average score = 2)</td>
<td>High</td>
</tr>
<tr>
<td>Increase in average annual temperature</td>
<td>Increase in causes decrease in agricultural productivity</td>
<td>High (average score = 5)</td>
<td>Moderate (average score = 3)</td>
<td>High (average score = 4)</td>
<td>Low (average score = 2.5)</td>
<td>High</td>
</tr>
<tr>
<td>Decrease in average annual precipitation</td>
<td>Decrease in agricultural productivity and revenue</td>
<td>Moderate (average score = 4.3)</td>
<td>Minor (average score = 2)</td>
<td>Moderate (average score = 3.15)</td>
<td>High (average score = 4)</td>
<td>Moderate</td>
</tr>
<tr>
<td>Increase in frequency of droughts</td>
<td>Moderate (average score = 4.3)</td>
<td>Moderate (average score = 3)</td>
<td>High (average score = 3.65)</td>
<td>Moderate (average score = 3.5)</td>
<td>Moderate</td>
<td></td>
</tr>
</tbody>
</table>

As over 70% of total agriculture in Jordan is rain-fed (5% of vegetables, 93% of field crops and 62% of fruit tree crops), projections of future precipitation changes and drought intensification often influence the magnitude and direction of climate impacts on crop production. According to Al-Bakri et al (2010) a 1% increase in temperature and 10% decrease in precipitation will reduce yield by 5% for olive, 7% for wheat and 18% for barley, while 2% increase in temperature and 20% decrease in precipitation will decrease yield by 10%, 21% and 35% respectively. Increasing evaporative demand owing to rising temperatures and precipitation decrease could increase crop irrigation requirements by between 5 to 20%, or possibly more, by the 2070s. Planting crop and fodder plant species and varieties that have high tolerance to higher temperatures will prevent loss of productivity with 1ºC or 2ºC increase in temperature. Low rainfall and higher evapotranspiration causes poor pasture growth, although output from natural pastures tends to be less vulnerable to drought than crop production. It may also lead to a decline in fodder supplies from fodder crops and crop residues.


\textsuperscript{165} Third National Communication of Jordan to the UNFCCC, 2014.
Official and traditional responses to climate-risks, specially drought

Due to chronic water scarcity in the country, recurrent drought and continuous influx of refugees as a result of political instability in the region, the following measures have become a regular practice in Jordan: (i) agreement with the water users associations on the rationing measures including the reduction in water allocated for irrigation; (ii) banning of summer plantations in the Jordan Valley and compensation of farmers; (iii) provision of irrigation water volumes allowing trees to survive and not to produce; (iv) mixing of treated wastewater with fresh surface water for irrigation; and (v) alert farmers to any degradation in water quality to enable them plan the use of such water for the suitable farming purposes. The MoA plays a significant role in assisting farmers to reduce the impact of drought. These includes assessing of drought-induced damages in agriculture, requesting allocation of emergency funds in the government budget and compensation of farmers, requesting technical and advisory services from FAO and aid from donors and NGOs. Other measures include: (i) coordination with relevant line ministries to increase imports and emergency storage of grains and fodders; (ii) provision of subsidies and soft loans to farmers and livestock breeders, re-scheduling of loans and partial or total exemption of farmers from interest rates on the Agricultural Credit loans; (iii) intensification of agricultural extension to the farmers and the promotion of the use of drought tolerant crops and of the best practices to deal with drought-related increase in pests and plant diseases; (iv) increased environmental awareness campaigns targeting the public; and (v) provision of free drinking water for livestock breeders, and free veterinary services.

There is a range of traditional practices that have been used to cope with water shortage and drought, especially in the SIGHT target governorates. These include: the installation of storage systems, such as tanks on top of houses; the acquisition of filtered water or use of purification systems; the harvesting of rainwater in pools, hafirs, and underground tanks or plastered cisterns with a capacity of 30 m$^3$ or more; and the use of treated wastewater. Local responses to drought events are more effective when are coupled with adaptive agriculture management measures: carefully scheduling of irrigation, the use of drought-resistant crop varieties and livestock breeds, the use of drip irrigation technologies, and the enhancement of the physical conditions of soil which enhances its water holding capacity, such as traditional micro-catchment water harvesting techniques. Communities adapting rangeland reserves governance systems to current socio-economic and environmental conditions, such as in the Bani Hashem reserve in Zarqa governorate, have adopted a rotating-resting system to allow the recovery of the biomass and specific diversity of the pastures, together with the construction of underground runoff water harvesting cisterns with a capacity of 30 m$^3$ to supply water to livestock. It is essential to improve farmer incomes and adaptation capacity to enhance collaboration between farmers and research institutions and centres such as NCARE, to get access to well-adapted technologies and inputs that have demonstrated successful results in experimental plots: (i) drought-resistant or salinity-resistant certified seeds or crop varieties to increase production under changing rainfall regimes; and (ii) innovative agronomic systems, such as conservation agriculture, and water harvesting technologies, such as the Vallerani system to harvest runoff water or underground water cisterns.

**Institutional capacity for climate risk reduction in the agriculture sector**

Currently, there is no national strategy for drought management or preparedness plans that focuses on mitigation to reduce or avoid the impacts of future events of these types. In 2007, MOA in cooperation with FAO prepared a document which is referred to as the “National Strategy and Action Plan for drought management”, but it only suggests a detailed road map with a set of

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167 Ibid.

Within MOA, two units are concerned with some parts of the drought management cycle:168

- The Drought Monitoring Unit (DMU) established in 2008 within NCARE, aiming to monitor and predict drought through satellite images. For instance, the unit provided information for decision makers about the status of vegetation during the drought conditions of 2009/2010.
- The Agricultural Risk Management Fund established according to law no. 5 of 2009, which aims to compensate the farmers during emergencies and natural disaster, in accordance with the criteria and ceilings set by the regulations issued for this purpose. This fund is still in its early stages and work is underway to develop the instructions to allow farmers to subscribe and pay subscription fees.

The role of MoA with respect to the announcement of drought is that of assessment of its severity and evaluation of its socio-economic impacts, discussing the pros and cons of announcing drought, and reporting the findings of a designated committee to MoA who submits its conclusions to the Cabinet of Minister. Should the latter take the decision to announce drought, a state of drought emergency is declared by the Prime Minister, who instructs to form a national drought committee involving the secretary generals of the Ministries of Agriculture, Water and Irrigation, Health, Finance and Interior under the presidency of the Minister of Interior to coordinate actions between the relevant line ministries during the time of the crisis. However, several reasons are behind the reluctance of the cabinet of ministers to declare the state of drought (e.g. the potential impact on tourism, the absence of a national criterion for drought, the implications for financial commitments towards farmers under current economic crisis). The absence of a legal framework which assigns the driver’s seat to one single body, the fragmented institutional and sectorial approach, and the lack of unified vision prevent an effective response to climate risks, namely drought. The situation is worsened by the multiplicity of international commitments and donor driven initiatives.

Jordan’s capacity to deal with natural hazard risk is still predominantly focused at the response stage. Although there is not a proper drought early warning system in operation in the country, there are many drought and floods relevant information systems and data that are maintained by several institutions (e.g. as meteorological data at the Meteorological Department, and agro-meteorological data at NCARE). All these efforts are however fragmented and sectorial-based. There is significant overlapping in the organizational mandates and structures without specific and/or clear roles and responsibilities of the institutions implicated in the different phases of drought and flood risk management. Furthermore, it is not clear till date, which institution is practically responsible for coordinating the drought and flood management efforts in the country (GDCD, HCCD, NCSCM, MOE, MOA, etc.). This results in fragmentation of efforts and lack of a unified vision. Moreover, there is limited technical capacity in the governmental institutions, weak linkages between research and policy making, and problems associated with data quality and availability.
2.5.2. Main Opportunities

A. Climate Change mitigation and adaptation

The TNC report proposes the following mitigation projects in agriculture and LULUCF:

- Rangeland restoration project, with the objective to planting of perennial fodder shrubs (500 shrubs/ha) in 6,000 ha of the Badia rangelands (Al Jafr and Al Husseinieh sub-districts within Maan Governorate) with Kochia scoparia (3,000 ha) and Atriplex halimus (3,000 ha), estimating a productivity of 500 kg/ha in average (100-300 kg/ha during the 1st and 2nd year), and soil organic carbon sequestration (SOC) rate of 2.4 g m^2/year over a period of 15 years. The same project proposes the protection of 10,000 ha of grazing land in the desert valleys of south Badia to control grazing impact on the indigenous Atriplex shrubland.

- Climate-smart agriculture project in the Jordan Valley on conservation agriculture to increase soil carbon (36-41% higher compared to conventional ploughing system) and replacing 50% synthetic fertilizer with compost to decrease emissions by 0.26, and improve soil health in terms of structure, productivity and water holding (reduction of 625 tonnes of CO2 equivalent/year).

The TNC report proposes the following adaptation measures for the agriculture sector:

- modification of cropping pattern and crop calendar including planting and harvesting dates;
- implementation of supplemental irrigation for rainfed crops and soil water harvesting techniques such as the Vallerani system;
- improvement of water use efficiency through drip irrigation;
- decentralized wastewater treatment is a viable option for farmers with a capacity of 200 m^3 per day. However, knowledge and financial constraints make that only few households in the TNC study area own and operate such treatment units;
- micro-catchment water harvesting that is widely implemented in the SIGHT target governorates of Jerash and Ajloun, using earth and stone bonds, terraces and pots, underground cisterns and tanks, small check dams, among others;
- desalination: Using clean energy such as solar and wind can be used for brackish water and groundwater desalination at a local, small scale;
- improvement of soil conservation and soil water storage through conservation agriculture;
- use of drought-, heat-, salinity-tolerant crops varieties; crop diversification;
- establishment of an integrated drought monitoring and early warning system at different levels;
- development and adoption of adaptive technologies and innovation through research and on-farm demonstrations;
- modification of policies, implementation of action plans, and integration of CC adaptation into cross-sectoral policy and institutional systems at national and regional levels in a consistent way.

In the National Action Plan to Combat Desertification (MoE, 2015) the following Sustainable Rangeland Management practices are proposed:

- Restoring soil fertility (by increasing organic matter content);
- Implementing soil conservation (terraces, stone walls);
- Improving water management (through water harvesting);
- Maintenance of stream flows and water springs;
- Re-vegetation of degraded range;
- Restoration of community rangeland governance and management;
- Improving livestock production (veterinary services); and
- Improving livelihoods through sustainable intensification of resource use.
B. Rangeland Governance

Revival of traditional rangeland governance systems (Hima)

In Zarqa river basin, (including areas in Jarash, Amman, Maqrouf, Balaqa, and Zarqa), a Hima system has been piloted in Bani Hashem community by IUCN in partnership with the MoA (Directorate of Rangelands and Badia Development), in terms of allowed stocking density, allowed grazing periods, and spatial arrangements of grazing allowances. Approximately 109,000 ha of rangelands belonging to the state, with rainfall levels between 100-200 mm, were estimated to be suitable for potential hima restoration in Zarqa river basin (Bani Hashem community started to manage 100 ha of the 1,500 ha of public forest land). The community at Bani Hashem has developed a local tribal law, called “Meathak Sharaf”, to help enforce the new land management system by restricting grazing. Meathak Sharaf has been endorsed by the Zarqa governor who represents the local government and can help enforce the law. The MoA has established a community based group (Hima Bani Hashem CBO) to follow up and sustain the process. After a 2 years of rotation-managing system, average dry yield increased from the 40 kg/ha of the baseline period up to 113 kg/ha in the cells subject to rotating enclosures. Moreover, they observe the improvements in terms of run-off reduction, enhanced water infiltration and sustained stream flow with higher water availability for livestock and supplementary irrigation schemes (according to ArcSWAT analysis, on average an additional 9.2 million m$^3$ of water are infiltrated annually to the shallow aquifer as a result of large scale Hima restoration within the Zarqa river basin, thus helping to increase the save yield of the basin – about 65-70 million m$^3$ per annum by 13-14%). Ecosystem services provided by restored rangelands through Hima in Zarqa river basin are:

- Between JOD 144-290 million of net-benefits to Jordan society;
- The net present welfare economic value to pastoralist communities of avoided forage purchase is in the order of JOD 16.8 million, assuming that the communities themselves bear the management cost of the Hima, and access rights to strengthen common property regimes are negotiated and agreed between the communities and the government;
- With an estimated economic value of JOD 2/m$^3$ of water, the total present value over a 25 year time horizon of groundwater infiltration as a result of Hima restoration amounts to JOD 188.5 million, or JOD 13.4 M/year; in this sense, Hima restoration is a cost-effective way of responding to water demands, and establishing payments for ecosystem service (PES) with public water utilities compensating pastoralists and farmers upstream is worth being considered;
- Estimated value of carbon sequestration benefits of up to JOD 38 million over a 25 year project cycle; and
- On average 307,500 m$^3$ less sediment per annum in the King Talal Dam.

Innovative New Participatory Management Systems for Rangelands

- The National Program for Rangeland Rehabilitation and Development (NPRRD) under the MoA, and implemented in a number of pilot areas (Mafraq: Menshiat El-Ghiath and Ruqban; Karak: Shrief; Tafila: Touana; Ma’an: Mreigha, Husseyyiniah and Hashimiah) involved the rangeland users and the project staff in developing and negotiating work plans at each pilot area, to be implemented by a Rangeland Management Group (RMG).
- The Sustainable Rangeland Management Project (SRMP) developed in 6 locations (Tafila: Gharandel and Buseira villages; Madaba: Faisaliyah and Fayha villages; Amman: Nqairah and Mhareb villages), developed a model for Community Rangeland Management Action Plans through a community participatory development process involving the village’s community members, and building the relationship between Governmental institutions and NGOs. The majority of farmers showed a real willingness to participate in the project because of small credits for micro-projects.

169 True abstraction rate exceeds 140 M m$^3$. 
The Hashemite Kingdom of Jordan
Small Ruminant Investments and Graduating Households in Transition (SIGHT)
Final Design Report
Appendix 12: Compliance with IFAD policies

- Mashreq-Maghreb multi-country Project, aimed to develop productive and sustainable small ruminant-based systems in two communities in Mafraq governorate, through the integration of crop and livestock production, both within and across arable and rangeland production systems. This is the only project implemented in Jordan where the local community plan has implemented and managed all the activities related to rural development.

- The Community-Based Rangeland Rehabilitation Project (CBRR) launched in 2007 by the Royal Botanic Garden, involving 38 families (by 2013) and applying grazing management plans resulting in a biomass increase by over 30% in a 3 year period, and an increase of native plant species from 436 in 2006 to 580 in 2012. Local families were trained to diversify income from bees, sun-dried yogurt (jameed) and mushrooms, sewing and handcraft.

- The Badia Ecosystem and Livelihoods Project (BELP) (one of the 5 MENA-DELP170 projects, funded by the GEF and WB, as from Sept 2011), supporting: (i) ecotourism-related income for communities in NE Badia along Zarqa and Mafraq governorates; (ii) Adapted rangelands management in southern Badia in a sustainable biodiversity-sound manner by involving local communities in the design and implementation of NRM (NCARE is the implementing agency, who contracted HFDJB171 to execute the community engagement).

- The Badia Development and Research Program (BDRP), implemented by the Higher Council for Science and Technology (HCST) in N and NE parts of Badia, with the assessment of rangeland resources, mapping of vegetation and water resources, water harvesting and restoration techniques, socio-economic analysis and CB for local communities (postgraduate researchers formed within local communities).

- The IUCN Sustainable Drylands Landscapes Project, funded by DANIDA, did a GIS study for the Jordan Badia, east of the highlands, to identify watersheds with high potential for rangeland development. 16 main rangeland watersheds with 69 sub-watersheds in the Badia have been identified to have such potential and are characterized by altitude and topography, rainfall, soil characteristics, vegetation zone and type and type of land ownership.

C. IFAD’s support to climate change adaptation, and climate-resilient rainwater harvesting and rangeland productivity improvement

- The climate change assessment studies undertaken in Iraq and Jordan in the context of the IFAD-funded and ICARDA-implemented Project “Improving food security and climate change adaptability of livestock producers using the rainfed barley-based system in Iraq and Jordan”, led to the production of Climate Change Atlases for both countries. The Climate Change Atlas for Jordan was produced by staff of the National Centre for Agricultural Research and Extension (NCARE), under the technical supervision of ICARDA staff and ICARDA’s Geo-informatics Unit. This relatively small investment in capacity-building, helped develop NCARE skills for applying and adapting the findings from global climate change studies to country-level. The interpretation of these maps will help in proposing suitable adaptation strategies to climate change for the barley and livestock farmers of Iraq and Jordan, by assisting adjustments in policies, farming practices, and technologies.

- Research on micro-catchment rainwater harvesting techniques by ICARDA172 and Jordanian scientists has led to the establishment of semi-circular bunds on contour ridges and furrows (using GPS laser-guided Vallerani machine, 3 of them purchased through tenders under IFAD ARMP project in 2015) and runoff strips in two communities of Jordan Badia. As an outcome of this research, an effective micro-catchment laser-guided system was identified for rainfall harvesting, which has led to improved water availability, increased vegetative cover and improved soil health, and provided rural communities

170 Desert Ecosystems and Livelihoods.
171 Hashemite Fund for the Development of the Jordan Badia.
substantial sources of feed (e.g. more than double the yield for barley and 1.6 times for rangeland and forage shrubs such as *Atriplex halimus*, compared to those without rainwater harvesting) for sheep and goats. The system has also reduced cost and time required to delineate contours for the plough to follow, and tripled the construction capacity up to 30 ha/day). This system has been implemented over 3,864 ha of rangeland in Jordan, and ICARDA suggests that a total area of 2.7 M ha has the potential for adoption of this system.

- The **GEF Irrigation Technology Pilot Project to Face Climate Change**, has successfully tested efficient irrigation technologies in the Jordan Valley and Highlands to allow farmers utilize water that is not presently being used for irrigation such as salty, brackish, and mixed water, thereby allocating more fresh water for human consumption. The tested technologies will reduce farmers’ vulnerability to drought conditions by securing a fixed quantity of water for crop production.

- The **GEF Project Mainstreaming Sustainable Land and Water Management Practices** has promoted the development of agro-ecosystem action plans to establish an integrated ecosystem management (IEM) approach for sustainable land and water management in Karak, Tafilah and Ma’an governorates. These plans resulted in the development of best practices for SLM in demonstration and scaling up areas, including land erosion protection mechanisms (26,000 cubic metres of gabions and check dams), reforestation of 120 ha and the implementation of water conservation measures through drip irrigation, irrigation pools, cisterns and grey water treatment systems.

2. Potential project’s social, environmental, and climate change impacts and risks

2.1. Key potential impacts

The project should not generate negative social, environmental, and climate change impacts, provided it builds on, and fully integrates lessons learned and best practices from previous IFAD projects (e.g. micro-catchment rainwater harvesting techniques under ARMP project; drip irrigation and use of waste water for fodder production under IFAD GEF projects) and from other national and development organizations (e.g. IUCN-ROWA, RBG, UNDP, DANIDA) on sustainable natural resource management, climate-resilient technologies with special focus to projections about higher water scarcity, effective governance systems for rangelands management and diversified production benefiting marginalize groups, especially women. The project rationale has embedded environmental sustainability aspects in a comprehensive way, addressing also the TNC climate change adaptation priorities, namely the increase of water harvesting infrastructure for livestock and fodder production making use of demonstrated traditional systems (e.g. underground cisterns); the use of drought- and salinity-resistant fodder species and varieties already tested and validated in the target governorates; the use of micro-catchment soil conservation and runoff water harvesting successfully tested by ICARDA under IFAD funded projects; the use of drip irrigation and waste treated water for fodder production and rangeland restoration. On the one hand, the project aims to assist the government and the small herders in the adoption of improved breeds of small ruminants, with the aim of reducing the excessive number of animals (better breeds with higher feed efficiency) and thus the impact on natural pastures. On the other hand, the project will demonstrate through pilot interventions in/around rangeland reserves best practices to improve pasture management that help diversify income from both fodder and pasture by-products (medicinal plants, bee keeping), to increase fodder production through crop-livestock integration, and to overcome water scarcity through the installation of rainwater harvesting systems. All in all, project interventions will enhance the ecosystem services provided by rangelands and thus will help increase the resilience of the socio-ecological system to climate change.

The project will have a strong focus on the most vulnerable groups – women and youth, with special focus to the Syrian refugees and the host communities – with significant resources to enhance the institutional and technical capacity of the project beneficiaries to improve small ruminant production, processing and marketing, and to diversify their business opportunities. The project will build on successful experiences of setting up formal and informal farmers’ groups (e.g. women, men and
mixed cooperatives, associations, etc.) and local platforms for the governance of natural resources in rangelands. SIGHT will establish collaboration frameworks with other organizations, such as UNDP, RBG, IUCN-ROWA, among others, with demonstrated capacity to support effective participatory processes on community-based natural resources management in rangelands.

2.2. SECAP Consideration in the Project Design

The project has fully integrated SECAP recommendations into design. SIGHT has addressed the complex interactions between environmental, socio-economic and political factors - land tenure and governance conflicts; feed scarcity for livestock and high dependence on subsidized imported fodder; number of animals exceeding carrying capacity – impacting rangeland resources and the livelihoods of rural population depending on small ruminant production. Despite government efforts (Rangeland Directorate at the MoA) to protect and improve rangeland management through the official designation of 33 governmental range reserves (13 in the target governorates), as a major contribution to poverty reduction, economic growth, and biodiversity conservation, reserves are threatened by overgrazing, woodcutting, plant collection and illegal hunting due to tenure conflicts, poor legislation and laws enforcement.

The project design has proposed a model to address the socio-economic and political barriers behind the unsustainable management of pasture resources, and the fodder and water scarcity. The project will intervene in/around a maximum of 6 rangeland reserves in the Highland/Steppe zones of the target governorates, with the objective to undertake pilot interventions that demonstrate innovative solutions to the governance and natural resources management problems in/around the target reserves, supporting the livelihoods of smallholder households depending on small ruminant production. SIGHT will establish collaboration frameworks with partner organizations (e.g. UNDP, RBG, IUCN-ROWA) that have supported the setting up of local community-based organizations (CBOs) platforms to improve the governance of common goods in/outside rangeland reserves. The establishment of community-based organizations and local-platforms for the governance of rangeland reserves is a very time-consuming process which, if initiated from scratch, will prevent SIGHT from having sufficient time to get results from concrete interventions on the ground. For this reason, the project will build on the previous work of partner organizations for the selection of beneficiary CBOs and the demonstration of innovative models within the framework of existing governance platforms.

The project will test and demonstrate the following interventions:

a) A rotation-resting system within the reserves, with the temporary exclusion of grazing in defined sections of the reserve, that rotates over time to cover the whole area of the reserve cyclically. This will imply a formal agreement on a rotation plan for pasture use among the users of the reserves (local communities from the villages around the reserves, as well as transhumant herders with historical customary rights for grazing in the area) that will be reinforced with the installation of movable fences, the enrichment planting or sowing of valuable pasture species making use of innovative soil preparation techniques that promote runoff water accumulation in the planted areas, the construction of rainwater harvesting reservoirs, and points of observation for local guards who control the respect of the rule. The project will build on the successful experience of the Beni Hashem Hima Reserve supported by IUCN-ROWA in Zarqa municipality, and on the successfully tested micro-catchment planting techniques for rainwater harvesting (e.g. Vallerani system) to restore vegetation in rangelands implemented by ICARDA under ARMP IFAD project.

b) The production of fodder (in rotation with food crops) by farmers’ groups in the farmland plots around the reserves, to cover part of the feed needs for their own livestock, or to be sold to other smallholder herders from the local communities. This will imply the construction of rainwater harvesting reservoirs, the installation of a micro-pressurized irrigation system, and the use of seeds from the most suitable fodder species and varieties adapted to climate-risks (e.g. drought-, heat-tolerant).
The theory of change of the proposed model is the following:

i. The temporary exclusion of reserve sections (with or without enrichment planting of valuable pasture species) will help improve pasture yield and plant species diversity, with a positive effect in terms of feed availability for livestock and income diversification opportunities (e.g. higher presence and biomass of a wider range of valuable pasture species supporting the harvesting of medicinal plants and bee keeping) for smallholder households, mainly women.

ii. The use and restoration of pastures in the reserves will be subject to compliance with the agreed rotation and resting system, which, in return, will improve ecosystem services for the benefit of biodiversity, watershed water balance, and economic benefits for smallholders based on the reserve by-products (medicinal plants, bee keeping). Moreover, the sale of water to the larger transhumant herders will also contribute to increase CBOs income, and cover the cost of maintenance of water reservoirs.

iii. Demonstration plots run by farmers’ CBOs around the reserve will contribute to local fodder production in a climate-resilient way – maximizing rainwater harvesting opportunities to be efficiently used with micro-pressurized irrigation techniques, and planting better adapted crop species and varieties – which will reduce smallholders’ dependence on subsidized imported barley and wheat bran for livestock. In fact, as demonstrated in Jordan and other countries in the region, implementing crop-livestock integration is expected to have a lower feeding cost than when herders rely on open access rangeland as the sole source of feed during the grazing period, and on subsidized feed during the hand feeding period. SIGHT demonstrations on crop-livestock integration will raise the interest of smallholder herders (individuals and groups) to rent farmers’ land to produce part of their fodder needs, or buy fodder locally produced by farmers’ (individuals or groups). Small household herders integrating crop and livestock will relied more on their own feed resources, with lower dependence to graze in the governmental reserves, avoiding competition with transhumant herders, and reducing pressure on natural pastureland. SIGHT Component 2 will facilitate funding through loans to individual farmers and farmer’s CBOs to invest in climate-resilient local fodder production that will help reduce both excessive pressure on natural pastureland and too much dependence on subsidized animal feed, while enhancing the ecosystem services of rangeland reserves and local livelihoods.

iv. The promotion among beneficiaries of less number of animals from improved breeds that can be considered efficient feed converters, will help reduce feed costs and the pressure of grazing on natural rangelands.

v. The climate change adaptation measures supported by the project (e.g. improved management/enrichment planting of pastureland; investments in rainwater harvesting; investments in efficient irrigation technologies; investments in improved breeds and climate-resilient fodder crops and varieties; income diversification through a diversified use of goods and services of rangelands) will have a positive effect on the watershed water balance of the target areas, the availability of water for livestock, fodder and food crops, and the diversification of income opportunities, with special focus on the most vulnerable groups.

3. Environmental and social category

The project should qualify for category B, provided it fully integrates the lessons learned, and best practices of previous IFAD projects (e.g. efficient water harvesting and soil water conservation techniques implemented by ICARDA under ARMP IFAD project) and of partners’ initiatives on the setting up of CBOs in the target areas, and the implementation of innovative solutions for the governance of communal resources in/around rangeland reserves. The effective creation and consolidation of participatory governance systems and community-based organization is a very time-

consuming exercise which, if starting from scratch, can prevent the achievement of the project objectives. For this reason, SIGHT will be used as a vehicle to upscale and expand the successful work of IUCN-ROWA in setting up an effective communal governance system in rangeland reserves, and the work implemented by partner organizations (e.g. UNDP, USAID, IUCN) in the setting up of CBOs in the target areas. The rationale and justification of SIGHT recognises that main constrains that need to be addressed to improve livestock productivity and build the resilience of socio-ecosystems in the target areas include inadequate animal feeding due to tenure problems resulting in overexploitation of pasture resources, insufficient fodder production locally with too high dependence on subsidized imported feed, animal breeds, low performance breeds and poor animal health, and insufficient availability of water resources. The proposed SIGHT approach seeks to address these constraints through a model for crop-livestock integration and income diversification in/around rangeland reserves, investments in a rangeland rotation-resting management system, climate-resilient rainwater harvesting and water-saving technologies for fodder production, diversified use of rangeland resources, and the promotion of improved livestock breeds and vet services.

SIGHT should prepare the ground for the introduction of these environmental sustainability elements through an appropriate capacity building process targeting all concerned stakeholders and using the skills built under IFAD previous investments within governmental institutions such as NCARE (e.g. GIS climate change modelling and mapping; climate-resilient agronomic technologies), and the local institutions built under other partners initiatives supporting CBOs and Local participatory platforms for the management of rangeland reserves. These experiences and best practices should inspire and match SIGHT’s capacity development interventions and human resources (FSTs) that are set to assist the public institutions, community and farmers’ organizations, individual beneficiaries, and staff from FSPs, to mainstream environmental and social concerns in policy making, small ruminants production, natural resources management, and small business development, which represents the main focus of SIGHT.

From the social point of view, SIGHT mainly addresses the key challenges faced by vulnerable women and youth from the Syrian refugees (70%) and Jordanian host communities (30%) in the target governorates, that is the lack of access to capital required for investment in micro-enterprises, lack of knowledge and skills, high susceptibility to economic shocks, and, in the case of refugees, high levels of indebtedness and poverty, limited access to mandatory work permits and restrictions on permissible occupations. SIGHT will provide women and youth with grant-based income-generating packages, and uncollateralized micro-loans for rural residents, including the necessary tuition to successfully establish on-farm and off-farm enterprises. In this sense, SIGHT will contribute to meeting the Government of Jordan’s commitments under the Jordan Response Plan for the Syria Crisis to provide livelihood opportunities for Syrian refugees. The project will capture the need to promote diversification of income sources, especially for vulnerable women households, in order to enhance rural livelihoods and food security, and build socio-economic resilience in/around rangeland reserves by reducing the risk of income loss caused by climate change.

4. Climate risk category

The project should qualify for Moderate Risk, provided it fully integrates the CC adaptation recommendations for the agriculture sector, proposed by the Government in the Third National Communication (TNC) to the UNFCCC. According to the TNC (2014), the overall CC vulnerability assessment for the agriculture sector in Jordan falls in the categories of moderate and high, with a “moderate” score for the increase frequency of droughts, especially in the highlands that characterize the target governorates. High vulnerability is mainly related to the low adaptive capacity of poor farmers in rural areas in Jordan who are expected climate-driven disruption of livelihood options (e.g. reduced livestock and pastures’ productivity, as well as fodder and water availability) that depend on natural resource management in the absence of adaptation measures. The proposed SIGHT approach seeks to increase the adaptive capacity of smallholder farmers in the target areas, including a balanced mix of CC adaptation investments that include, *inter alia*:
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- Improvement of degraded pastures in rangeland reserves through community-based rotation-resting governance systems, and improvement of vegetation cover and yield/ha with higher diverse native plant species supporting grazing and a diversified use of pasture by-products;
- Infrastructure that allow/facilitate the communal governance of rangeland reserves and sustainable pasture management, which is critical to adapt the seasonal livestock pressure to climate constraints (stock watering points, fences, etc.);
- Water management measures to favour the climate resilience of pasture resources through increased soil water retention and regulation and improved watershed water balance (e.g. the use of micro-catchment in fodder planting interventions in the reserves to harvest and retain water in the soil; the establishment of water reservoirs in/around reserves; the use of efficient irrigation technologies for fodder crops around the reserves);
- Machinery to produce/harvest/store fodder (e.g. grass cutters, silage making machines, etc.) which increases the availability of fodder and creates reserves for a longer period, and for income diversification (e.g. solar dryers for medicinal herbs, equipment for bee products); and
- Public investments to produce/disseminate improved livestock breeds and ensure control and services on animal health.

SIGHT will enhance the institutional and technical capacity of existing CBOs and local governance platforms for rangeland reserves, through permanent assistance of three Farmer Support Teams (FSTs) that will assist them with training, facilitation and advisory services (e.g. production, processing and marketing issues related to livestock, fodder crops, medicinal plants, bee keeping; gender and youth issues; institutional development of community organizations; conflict resolution; etc.) on full time basis for 5 years.

In case the adaptive capacity of the project beneficiaries is strengthened to effectively implement the above proposed measures, SIGHT will be strongly aligned with, and contribute to the priorities of the Third National Communication (TNC) to the UNFCCC, the "Program for Mainstreaming Gender in Climate Change Effort in Jordan", the National Strategy for Agriculture Development (NSAD), the Poverty Reduction Strategy (PRS), the aligned National Action Plan (NAP) to Combat Desertification in Jordan, and the Jordan Water for Life Strategy, among others.

5. Recommended features\textsuperscript{174} of project design and implementation

5.1. Mitigation measures

There is no need for additional information on mitigation measures, as climate change adaptation, poverty reduction and gender inclusion are fully integrated in the project design.

5.2. Multi-benefit approaches

Although the focus of SIGHT is mainly on increasing small ruminants’ productivity, the project has an sustainable livelihoods approach supporting income diversification opportunities for vulnerable women and youth, through both on-farm and off-farm packages. The project model for sustainable rangelands management enhances the ecosystems services provided by rangeland reserves, including a wide range of provisioning services (e.g. income diversification from fodder, medicinal plants, honey, food crops, water, livestock meat and dairy products), regulating services (e.g. watershed water balance, soil carbon), and supporting services (habitat improvement, soil fertility, species diversity). This model will allow the overall IFAD intervention to have an impact on smallholders’ income and rural

\textsuperscript{174} Guidelines as to what constitutes ENRM Core Principles and Best-Practice Statement can be found in IFAD ‘Environment and Natural Resource Management Policy’ (2011).
livelihoods in general, and achieve economic, social, and environmental benefits in a framework of sustainability.

5.3. Incentives for good practices

The “integrated” approach of the project will strengthen the linkages amongst the various users in/around rangeland reserves, collectively generating positive externalities (e.g. improved yields, better infrastructure for water and rangeland management, safer and better quality livestock products, income diversification for vulnerable households, expanded employment) and providing solid grounds for better governance of natural resources (i.e. members from community-based organizations involved in the production of fodder crops around the reserves, the control of rotation-resting management of pasture resources – both fodder and by-products – in the reserves, while transhumant herders will benefit from improved grazing conditions and water supply in the reserves conditioned to the respect of the agreed governance rules). The project will also support training and on-farm demonstrations piloting innovative pasture management systems, and climate-resilient fodder production technologies, targeted advisory services and exposure to best practices through the participation in study tours and trade fairs.

The proposed investment will provide incentives for smallholder farmers to improve natural rangelands through climate-resilient investments for fodder production, water availability and income diversification. In addition, the Component 2 will provide incentives for on-farm and off-farm livelihood opportunities through grant based income-generating packages and uncollateralized micro loans. The Project’s strategy to ensure equitable access to economic opportunities to vulnerable groups, will primarily benefit women and youth from Syrian refugees and Jordanian host communities.

The integrated implementation of the IFAD interventions in/around rangeland reserves will generate a diverse set of economic, social, and environmental benefits, deriving from: (i) increased pasture yields, species diversity and rangeland by-products; (ii) raised feed crop yields and expanded cultivated feed crop area; (iii) improved water availability and efficient use with a positive impact on agriculture production, human needs and water balance in rangeland watersheds; (iv) improved resilience and capacity of smallholders for sustainable management of livestock and rangeland resources; (v) reduction in livestock mortality and improved livestock performance; (vi) opportunities for better breed improvement and selection; (vii) higher access to grants and micro loans, and to improved technology and business development and management techniques; (viii) improved quality standards for livestock products, improved quality control and delivery mechanisms, and better managed seasonality of supply; and (ix) reduced public health risk due to healthier livestock and more sanitary milk and meat production and processing.

5.3. Participatory processes

SIGHT builds on successful experiences in the setting up of innovative solutions for the governance of common pasture resources in/around rangeland reserves through local participatory platforms, and community-based organizations that make a collective use of natural resources. SIGHT will build on these experiences to demonstrate a model for community-based crop-livestock integration investments in/around the rangeland reserves to improve productivity, diversify production, and increase marketing opportunities. This approach will provide for strengthening of the linkages amongst the various actors involved in the management of natural resources – water, pasture products, fodder and food crops - in/around the reserves, collectively generating positive externalities and providing solid grounds for a better governance system.

Through Component 2, SIGHT will implement a participatory process to map and select eligible beneficiaries for the provision of financial services – both grant based income-generating packages and uncollateralized micro loans - to the most vulnerable population, that is women and youth from Syrian refugees and Jordanian host communities with lack of access to capital required for investment
in micro-enterprises, lack of knowledge and skills, limited access to financial services and high susceptibility to economic shocks. This will be done based on a proven Graduation into Sustainable Livelihoods Approach\textsuperscript{175} that consists of a carefully sequenced, multi-sectoral intervention, comprising social assistance to ensure basic consumption, skills training, seed capital, and employment opportunities to jump-start an economic activity, financial capability, and mentoring to build confidence and reinforce skills to establish and run the business.

The SECAP recommends that the project includes in its inception phase a baseline assessment of: (i) the successful examples of participatory local platforms for the management of rangeland reserves promoted by partner organizations in the target governorates; and (ii) the successful achievements and the (CBOs) established in the target governorates through financial support from other donors engaged in livestock and agriculture development, such as USAID, UNDP, FAO, IUCN, etc.

6. Analysis of alternatives

SIGHT project design builds on successful experiences and best practices from previous IFAD projects and other organizations’ experiences on sustainable natural resources management and climate change adaptation. Project Sub-component 1.2 has been designed responding to the TNC priorities for adaptation in the agriculture sector, and incorporating best practices – based on traditional knowledge and innovation – developed by IFAD-funded projects and other development organizations, to increase water harvesting for livestock, improve soil conservation and soil water harvesting for both fodder crops and rangeland restoration, make an efficient use of irrigation water for fodder crops through micro-pressurized technologies and the use of treated waste water, and to increase crop/rangeland resilience to drought and salinity through the use of resistant plant species and varieties in the production of fodder and restoration of rangelands. Moreover, project design is based on demonstrated alternatives to the traditional rangeland governance system, building on successful experiences applied by IUCN and other partners in the rangeland reserves.

7. Institutional analysis

7.1. Institutional framework

The Ministry of Agriculture (MoA) will be the implementing agency responsible for the implementation of the SIGHT project. A Project Steering Committee (PSC) will be established and will be co-chaired by a representative from the Ministry of Planning and International Cooperation (MOPIC). Day to day management and implementation of the SIGHT will be performed by a dedicated Project Management Unit (PMU) that will be established within the MOA premises in Amman. The principal functions of the PMU will be to carry out the overall programming and budgeting of Project activities, and take the lead in: (i) Project implementation in cooperation with a range of implementing partners, including Participating Financial Institutions and service providers; and (ii) monitoring and documenting progress.

Specialized staff will be recruited on a competitive basis from the following positions for which ToRs will be made available in the Detailed Design Report: Project Director, Programme Officer, M&E Specialist, Procurement Specialist (part-time – seconded from MoA), Financial Management Specialist (part-time – seconded from MoA), Gender and Livelihood Specialist, and Driver. Short-term technical expertise will be used as and when required from the existing pool of specialists from MOA, NCARE, and the universities such as Jordan University for Agriculture and Technology (JUST). As needed, recruitments from the private sector, will be based on TORs prepared by the PMU and approved by IFAD. The Directorates of Agriculture in the target Governorates will be involved in

\textsuperscript{175} See: http://www.cgap.org/sites/default/files/Brief-Graduation-Pathways-Dec-2016.pdf
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supporting implementation of specific activities based on their geographic locations and the description of support needed as detailed in the PIM.

7.2. Capacity building

Component 1 of SIGHT “Investment in Farmer Services” will have strong focus on capacity building. Sub-component 1.1 “Enhancing Public Services” will enhance the capacity of public facilities (sheep and goat stations, animal health laboratories, quarantine and certification facility) and their staff to help them deliver better services (including training) to small herders on animal breed improvement and artificial insemination, animal health, and animal traceability. Both technical staff (veterinarians, livestock production engineers and existing para-vets) and small ruminant holders through training programs, farmer exposure visits and study tours to upgrade their knowledge and skills. A Training Needs Assessment (TNA) will be conducted to tailor the training program according to the needs of the stakeholders. The Governorate Agricultural Directorates of the MoA and NCARE will establish Government Field Teams (GFT) to work with the project for a better outreach to the target group. Each GFT (one per target governorate) will consist of 2 or 3 designated staff which will include some of the following specializations (depending on the relative needs in the governorate): veterinarian, small ruminant husbandry specialist (production and nutrition) and crop specialist. The GFTs will work together with the Farmer Support Teams (see subcomponent 1.2) as one Field Team (FT) with a joint work and delivery plan. The GFTs will report to the PMU for the work related to the project in their respective governorates.

Sub-component 1.2 “Improving Community and Private Sector Services” will support the establishment of 3 Farmer Support Teams (FSTs) in each governorate to promote behavioural changes among small ruminant farmers in their breeding practices, expand the outreach of the project, support the farmer advisory services and work closely with the GFTs. Each FST will be composed of one livestock production specialist, one livestock health/veterinary specialist and one community mobilization specialist (who will be a female). FSTs will work together with the GFTs as one Field Team (FT) with a joint work and delivery plan. The FTs will report directly to the PMU. The FSTs are expected to assist small ruminant farmers in bringing about behavioural change in their breeding, health and nutrition practices, and the adaptive management of fodder crops and rangeland restoration in the target reserves.

Sub-component 2.3. “Businesses Development Services” will invest significant resources to fund the mapping and selection of beneficiaries – vulnerable women and youth from Syrian refugees and Jordanian host communities - for the customized grant-based livelihood packages, skills training and the business development support and mentoring services, as well as to build the capacity of participating professional financial service providers (FSPs) to lend to the rural and agriculture sector.

7.3. Additional funding

There is an effective consideration of social, environmental and climate change adaptation needs within SIGHT rationale and project design. Provided integration takes place in an effective way, no additional funding will be required to cover the environmental sustainability needs of SIGHT.

8. Monitoring and Evaluation

Project monitoring and evaluation will be conducted in accordance with established IFAD procedures and will be provided by the Project team with support from IFAD. The Project Logical Framework provides indicators for Project implementation along with their corresponding means of verification. These will form the basis on which the Project's Monitoring and Evaluation (M&E) system will be built on. The M&E system will generate quantitative and qualitative verifiable information on the Project’s performance in a form that will assist the Ministry of Agriculture and the PMU to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action to
be taken to correct encountered problem during implementation. The M&E generated information will contribute to facilitating the workflow and quality of the decision-making by providing the means of focusing on implementation problems and ensuring effective communication and co-ordination.

The M&E system will be divided in two overall key functions: **progress monitoring** (Input/Activity/Output) and **Outcome/impact monitoring and evaluation**, as described in the project document. Both are part of a systematic, participatory learning process geared towards ensuring that the Project attains its planned objectives and impact. The M&E list of indicators that will be employed to monitor Project implementation and assess its impact, including RIMS indicators are described in the Logical Framework. The PMU M&E Officer will be responsible for running the internal M&E and organizing the base line and impact assessment survey. Immediately after the formation of the PMU, the SIGHT M&E Officer will develop, with IFAD support, the Management Information System. The system will be designed based on the requirements identified in the Project Logical Framework and in keeping with IFAD RIMS requirements and the guidance provided by the technical divisions of IFAD on M&E. The system will have the capacity to provide gender disaggregated data on all key indicators. The overall responsibility for the M&E activities will lie with the Project Manager, however, she/he will be assisted by the M&E Officer in preparing all progress and monitoring reports.

**Mid-Term Review** will be carried out towards the end of the Project's third year. The review will cover, among other things: (i) physical and financial progress as measured against AWPBs; (ii) performance and financial management of contracted implementing partners; and (iii) an assessment of the efficacy of technical assistance and capacity building activities. An independent **Final Evaluation** will take place three months prior to the Project completion date, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. Accordingly, and Impact Assessment, as an input into the Project Completion Report that should be undertaken by a neutral agency with no previous involvement in Project implementation. During the final year of Project implementation, as part of the preparation of the IFAD-required Project Completion Report/Impact Assessment, the M&E data collected over the Project implementation period will be used as part of a thorough assessment of Project achievements, in terms particularly of changes in the livelihoods of beneficiaries that relate to the implemented Project activities, and the sharing of lessons learned and development experience.

9. **Further information required to complete screening, if any**

There is no need for additional information to complete screening.

10. **Budgetary resources and schedule**

Not applicable.

11. **Record of consultations with beneficiaries, civil society, general public, etc.**

The International Fund for Agriculture Development (IFAD) conducted a Detailed Design Mission for and Graduating Households in Transition Project (SIGHT) from March 12th to 28th, 2017 in Jordan.

During its visit, the mission held meetings with a wide range of agencies including Ministry of Agriculture (MoA) and the National Centre for Agricultural Research and Extension (N CARE), Ministry of Planning and International Cooperation (MOPIC), Ministry of Environment (MoE), Ministry of Finance (Department of Government Financial Management Information System), Central Bank of Jordan (CBJ), the Jordan Cooperative Corporation (JCC), Agriculture Credit Corporation (ACC). The mission also met with international agencies working in the country to share their experience such as
Consultations were held with NGOs and other institutions including Jordan River Foundation (JRF), Jordanian Hashemite Fund for Human Development (JOHUD), Arab Women Enterprise Fund (AWEF), Royal Society for Conservation of Nature (RSCN), the Regional Office for West Asia of the International Union for Conservation of Nature (IUCN-ROWA), Caritas International and Danish Refugee Council (DRC) to discuss their on-going portfolio and explore possible collaboration.

The mission also visited: Agricultural Directorates in Irbid, Mafraq, Ajloun, Jerash, Amman and Madaba Governorates; Khanasrah Sheep Station; Al-Jiza district Agricultural Directorate (Amman Governorate); Quarantine facilities in Mafraq; rangeland nursery in Khalidiya region; Women's CBO in Bushra Village in Irbid; Women's Cooperatives, Bannat ul Jamya and Women's Association in Mafraq; Agriculture Association for Livestock Breeders, in Yarmouk, Irbid; the Rangeland Reserves of Rajeb in Ajloun, Bani-Hashem in Zarqa Governorate and Al Wallah Goat Station in Madaba, where team members had the opportunity to interact with local government staff, farmers, livestock owners and members – both men and women - of formal or informal farmer organizations. The mission also undertook consultations with men and women Syrian refugees in Madaba and Irbid to assess their needs and ways of how SIGHT could contribute to improving their livelihoods.

A second mission (3-14 June 2017) mission held meetings with a wide range of agencies including Ministry of Agriculture (MoA), the National Centre for Agricultural Research and Extension (NCARE), Ministry of Planning and International Cooperation (MoPIC), Central Bank of Jordan (CBJ), etc. The mission also met with the international agencies working in the country to share their experience such as the United Nations Food and Agriculture Organization (FAO), European Bank for Reconstruction and Development (EBRD), the United Nations High Commissioner for Refugees (UNHCR), the Swiss Agency for Development and Cooperation (SDC), the Danish Refugee Council (DRC) and several potential NGO partners and projects such as Jordan River Foundation (JRF), Jordanian Hashemite Fund for Human Development (JOHUD), Arab Women Enterprise Fund (AWEF), to discuss their on-going portfolio and explore possible collaboration.
Appendix 13: Contents of the Project Life File

1. Working Paper 1: Market Assessment
2. Working Paper 2: Access to Financial Services
Working Paper 1: Market Assessment
Working Paper 1: A Rapid Small Ruminants Value Chain and Marketing Analysis in Jordan

1. Brief Background

The aim of this report is to present findings of the analysis related to the small ruminants’ value chains and markets. It provides a technical note on the findings of the analysis as the recommendations listed in the report will focus on innovative solutions to address the constraints both at the production and the marketing ends. The findings could be considered as a contribution for the planning process of interventions and more fully understand the value/supply chain management functions in six locations namely Mafraq, Irbid, Ajloun, Jerash, Madaba and South Amman. Based on these findings, baselines will be established for the purpose of designing interventions which will lead to improvement in the competitiveness of the related sectors.

2. Methodology

The method of value chain diagnostics is applied to understand the small ruminant value chains in the six selected locations as well as explore how actors operate in order to ensure the link between production, logistics, processing, and marketing of the products in each examined location. The tool of diagnostics employs the approach of integrated value chain analysis which focusing on a comprehensive analysis is explained for each value chain structure. This is for mapping product/market value chains with focusing on quantity flow, the key actors and their functions, geographical dimension, and final products. Benefit-cost of the enterprise is also provided for small ruminant chain in each location. A critical identification of constraints and opportunities was undertaken with the key actors in the selected value chains.

The data collection related to focus groups, site visits and observations with key actors, in addition to a range of stakeholders for each value chain were employed for the purpose of understanding these value chains in their specific locations. The field work was conducted in June 2017 and consisted of five focus groups. Each group included approximately 20 participants (90% of small sheep producers e each producer owning a maximum 150 heads as well as 10% of other participants such as processors, traders, service providers and government employees). In total, 100 participants were consulted in the six study-subject locations/governorates, and the results included with similarities and differences that will be explained in this report based on the tasks and deliverables provided by IFAD’s ToR.

3. Current Markets

In the following table, the study identifies and quantifies market demand that is accessible to a small sheep producer of 100 heads by focusing initially on local markets.
Table 1: Market Demand in Six Locations/Governorates in Jordan

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Market Type –Unit</th>
<th>Market Location</th>
<th>Product Type</th>
<th>Time of Selling/ Months</th>
<th>Total Quantity Unit/Year</th>
<th>Selling Prices JD/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mafraq</td>
<td>-Lamb (95%)</td>
<td>Wholesale market (Mafraq)</td>
<td>-Meat (per head)</td>
<td>-Spring term</td>
<td>95 heads</td>
<td>100/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (5%)</td>
<td>-Labban</td>
<td>-Fresh milk</td>
<td>-Spring term</td>
<td>25KG/day</td>
<td>0.7/KG</td>
</tr>
<tr>
<td>2 Irbid</td>
<td>-Lamb (20%)</td>
<td>Wholesale market (Irbid)</td>
<td>-Meat (per head)</td>
<td>-Spring term</td>
<td>85 heads</td>
<td>95/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (80%)</td>
<td>-Labban</td>
<td>-Dairy Products (Cheese)</td>
<td>-February-June</td>
<td>40 KG/day</td>
<td>0.75/KG</td>
</tr>
<tr>
<td>3 Ajloun</td>
<td>-Lamb (70%)</td>
<td>Traders (Ajloun)</td>
<td>-Meat (per head)</td>
<td>-January-February</td>
<td>90 heads</td>
<td>90/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (30%)</td>
<td>-Labban (Ajloun)</td>
<td>-Fresh milk</td>
<td>-January-April</td>
<td>75 KG/day</td>
<td>0.7/KG</td>
</tr>
<tr>
<td>4 Jerash</td>
<td>-Lamb (%30)</td>
<td>Local markets (Jerash)</td>
<td>-Meat (per head)</td>
<td>-Spring term</td>
<td>85 heads</td>
<td>85/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (%70)</td>
<td>-Labban</td>
<td>-Dairy Products (Labaneh)</td>
<td>-March-July</td>
<td>40 KG/day</td>
<td>0.75/KG</td>
</tr>
<tr>
<td>5 Madaba</td>
<td>-Lamb (60%)</td>
<td>Wholesale market (Madaba)</td>
<td>-Meat (per head)</td>
<td>-January-March</td>
<td>90 heads</td>
<td>90/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (40%)</td>
<td>-Labban, cooperatives and processing units</td>
<td>-Dairy Products</td>
<td>-February-April</td>
<td>35 KG/day</td>
<td>0.7/KG</td>
</tr>
<tr>
<td>6 South Amman</td>
<td>-Lamb (60%)</td>
<td>Wholesale market</td>
<td>-Meat (per head)</td>
<td>-January-March</td>
<td>90 heads</td>
<td>95/head</td>
</tr>
<tr>
<td></td>
<td>-Milk (40%)</td>
<td>-Labban, cooperatives and processing units</td>
<td>-Dairy Products</td>
<td>-February-April</td>
<td>35 KG/day</td>
<td>0.7/KG</td>
</tr>
</tbody>
</table>

Unit: Lamb=Head/ Fresh Milk=KG  
Dairy products: Yoghurt, Labneh, White cheese, Jameed, Butter and Ghee  
Spring term: March, April and May.  
Lamb: aged 2-4 months  
Each herd of 100 heads has 95 Ewes which give 85-95 Lambs
The market for all livestock products is considered as a daily market in Jordan. Most likely, you can find either one or mix of these products (meat, milk, yoghurt, Jameed and white cheese) in every household, which reflects the large market size in Jordan. The two most important products sold by small sheep producers are lambs and fresh milk. Figure 1 illustrates the types of markets which are available for the outputs of small sheep producers in these six governorates.

- **Mafraq.** Lamb meat is the main product of sheep producers (95%) which is considered as the major source of income. The main targeted segment is lamb market since Mafraq wholesale market is dominated by small producers with different types of traders such as other producers, butchers, few exporters etc. Low percentage of markets is for milk (5%) which is sold to Labbans.

  ![Milk Type](image1)

- **Irbid.** The essential product of sheep producers is milk (80%). The main targeted segment is dairy product markets as Labbans and Jabbans are dominated by small producers to sell their fresh milk. However, low percentage of other markets is for lambs (20%) that are sold to traders in Irbid wholesale market.

- **Ajloun.** Selling lambs is the crucial market in Ajloun which represents 70% of the total production, while other markets concentrates on fresh milk (30%). Lambs are supplied by sheep producers in Ajloun to traders specialized in lamb fattening in Madaba, AlMafraq and AlGhor (Jordan Valley area), (i.e. there is no local wholesale market to sell lambs in

![Lamb Type](image2)
Ajloun governorate). Traders in those markets sell lambs in both the local market (e.g. Mafraq, Irbid, Al Beqaa, AlGhor and Sahab district) and export markets (exported occasionally to the GCC).

- **Jerash.** The main market segment is dairy products which represent 70% of the total fresh milk production. In addition, 30% of the production of sheep producers is employed to produce lambs (20%) that is sold to wholesale markets in Irbid and Al Beqaa or sometimes in Mafraq (i.e. there is no local wholesale market to sell lambs in Jerash Governorate). The major manufactured products of milk are Labneh and Yogurt. Whereas 80% of animals are sold in the wholesale markets, the other 20% is sold for traders and other producers in Jerash.

- **Madaba.** The main products of sheep producers are lambs (60%) and fresh milk (40%). The main targeted segment is lamb market since the Madaba wholesale market is dominated by small producers to meet various types of traders. The other targeted segment is dairy market as Labbans and Jabbans are dominated by small producers to buy their fresh milk.

- **South Amman.** Lambs (70%) and fresh milk (30%) are the main products of sheep producers. The essential targeted segment is lamb market where Amman (Sahhab) wholesale market is dominated by small producers to meet the other types of traders. Traders in these markets sell lambs in both the local and export markets. However, dairy product market is the other targeted segment where sheep producers sell their daily fresh milk directly to Labbans and Jabbans which are dominated by small producers.

4. **Economic Visibility: Inputs, Costs and Prices**

Sheep is the pillar of the national livestock industry in Jordan which represents about 65% of the animal units. Overall, sheep production provides 42.5% of fresh milk as well as 57.5% of red meat in the studied locations. In table 2, the estimated total cost for operating a farm of 100 sheep heads is 47,535 JD/Farm. The estimated variable total cost for one year is 27,420 JD/100 heads. The total profit items are from fresh milk (0.5 KG/head x 95 heads x 0.75 JD/1KG x 100 days =3,563 D) and Lambs (80 head/Year x 100 JD/head =8,000). However, producers also earn indirect income by keeping 20% of new born lambs and selling dairy products, ewes and rums. The sheep wool is with no value as there is no existing market. All inputs, costs and selling prices are mostly similar in all the study locations. Thus, the overall description is provided on what are the inputs, quantity (unit), costs and prices for a small producer of 100 sheep heads.
5. Market Maps

The study identifies the different marketing channels and market flows, in addition to clarify how small producers fit into these types. The results show that the market value chains are generally very short and direct amongst all the governorates. Some distinct features of each of the markets are outlined below.

Mafraq. Producers are highly productivity-focused: animals are supplied by local source where each herd of 100 sheep includes 95 ewes and 5 rams. In addition, there is the possibility that 15-20 lambs could become new ewes within the next year. The market chain is very short: the dominated chain is [small wholesale-producer market]. The main products are lambs (95%) which are sold to the wholesale market in Mafraq as well as milk (5%) that is sold to Labbans in Mafraq. Small producers sell their lambs and a few ewe heads in the Mafraq wholesale market to various types of traders, who in turn resell them mainly to other traders and customers inside Mafraq, other governorates and a very few exporters.

<table>
<thead>
<tr>
<th>Table 2: Market Statistics for Small Ruminant Production</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
</tr>
<tr>
<td>1.1. Animal female (Ewe)</td>
</tr>
<tr>
<td>1.2. Animal Male (Ram)</td>
</tr>
<tr>
<td>1.3. Animal Young (Lamb)</td>
</tr>
<tr>
<td>2. Feed -Barley /Bran</td>
</tr>
<tr>
<td>3. Grazing</td>
</tr>
<tr>
<td>4. Breeding</td>
</tr>
<tr>
<td>5. Health Services/100 heads</td>
</tr>
<tr>
<td>6. Watering</td>
</tr>
<tr>
<td>7. Labours</td>
</tr>
<tr>
<td>8. Electricity</td>
</tr>
<tr>
<td>9. Tools</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>-Feed units:10</td>
</tr>
<tr>
<td>-Water Tanks:5</td>
</tr>
<tr>
<td>-JD 20/unit</td>
</tr>
<tr>
<td>-JD 200</td>
</tr>
<tr>
<td>-Total: 1700 JD</td>
</tr>
</tbody>
</table>
Irbid. Producers are not considered as productivity-focused producers. All of them are related to the local source where each herd of 100 sheep includes 98 ewes and 2 rams. In addition, 20-40 lambs are likely to become new ewes in the next year. The market chain is very short: the dominated chain is [small Labban-producer (milk) or lamb wholesale market traders (meat)]. The major products are fresh milk sold to Labbans and Jabbans in Irbid (80%) and lambs sold to traders in the Irbid wholesale market (20%). Producers utilise their fresh milk to transform it into various dairy products to be sold to local people.

Ajloun. Producers are productivity-focused. Animals are obtained by local source as each herd of 100 heads contains 95 ewes and 5 rams. In addition to keeping 15-30 lambs for the purpose of becoming ewes during next year. The market chain is medium: the dominated chain is [small lamb-producer wholesale market traders (meat) or Labban (milk)-Jabban]. Consequently, the main market channels are local producers as there is no wholesale market, whereas the lamb sources are totally from local traders including Jerash (80%), Mafraq (10%) and Ajloun (10%). The major products are lambs (70%) and fresh milk (30%). Sheep producers in Ajloun supply lambs to traders specialized in lamb fattening in Madaba, AlMafraq and AlGhor. Thus, traders in these markets sell the lambs in both the local and export markets.
Jerash. Producers are rarely productivity-focused. Animals are collected from local source where each herd of 100 heads includes 95 ewes and 5 rams. In addition, 20-40 lambs are kept to grow and become ewes in the next year. The market chain is medium: the dominated chain is [small Labban-producer (milk)-Jabban or lamb wholesale market traders (meat)]. The main products are lambs (30%) and fresh milk (70%). Regarding the milk products, Labbans (collectors) are the main domain of both the sale and marketing related to the dairy products to the markets in Jerash (20%), Amman (75%), and others areas and exports (5%). Producers employ their fresh milk to convert it into various dairy products to be sold to local people. Lambs are normally supplied by sheep traders in Jerash to the wholesale markets in Irbid and Al Beqaa, or sometimes in Mafraq. Traders in these markets sell the lambs basically in both the local and export markets.

Madaba. Producers are considered as medium productivity-focused. Each herd of 100 heads contains 95 ewes and 5 rams. In addition, 15-25 lambs are likely to become new ewes in the upcoming year. The market chain is medium: the dominated chain is [small lamb-producer wholesale market traders (meat) or cooperative/Labban (milk)-Jabban]. The main products are lambs (60%) and fresh milk (40%). Regarding the lamb product, sheep producers sell lambs to the wholesale market in Madaba. Producers also move their herds from Madaba to ALGhor during winter term for the purpose of saving animals during cold weather and also find fields for grazing. Afterwards, herds come back again to Madaba area during spring term. Fresh milk is sold to private cooperatives, labbans and processing units which are considerably available in Madaba.

South Amman. Producers are medium productivity-focused. Each herd of 100 heads includes 95 ewes and 5 rams. In addition, 15-25 lambs are kept for the purpose of becoming ewes within next year. The market chain is medium: the dominated chain is [small lamb-producer wholesale market traders (meat) or cooperative/Labban (milk)-Jabban]. The main products are lambs (60%) and fresh milk (40%). Regarding the lamb product, sheep producers sell lambs to the wholesale market in South Amman. Producers also move their herds from South Amman to ALGhor during winter term for the purpose of saving animals during cold weather and also find fields for grazing. Afterwards, herds come back again to South Amman area during spring term. Fresh milk is sold to private cooperatives, labbans and processing units which are considerably available in South Amman.
traders (meat) or cooperative/Labban (milk)-Jabban]. The main products are lambs (70%) and fresh milk (30%). In respect of the lamb product, sheep producers sell lambs to the wholesale market in Sahab wholesale market. Fresh milk is sold to Labbans and processing units which are available in south Amman.

Lamb Chain Map (70 %):

![Lamb Chain Map](image)

Milk Chain Map (30%):

![Milk Chain Map](image)

6. **Key Constraints**

**Market.** There is high domestic demand for all dairy products. However, there is no stable marketing strategy to attract consumers in Jordan. There is neither branding strategy nor certified products and pricing strategy. As a result, consumers are very unsure about standards, environmental and health concerns. Most of dairy products are basically supplied by sources where there is no quality control, no certificates, no brand name and limited government control. One of the key issues for a competitive advantage is product taste and preference advantage. Each Governorate is best known for a particular product. For instance in Mafraq (lamb meat), Irbid (cheese), Ajloun (lamb meat), Jerash (Labaneh), Madaba (lamb and dairy products) and south Amman (lamb and dairy products) are reputed to be of good taste. However, Jordan market is yet weak in terms of branding these tasty products and it also has no local brands for these products.

In Jordan, the consumption of lamb meat is almost 16 thousand tons of local lambs, 36 thousand tons of imported lambs and also 20 thousand tons of imported frozen lambs. In addition, the Jordanians are basically prepared to slaughter about 250 thousand animals of various nationalities each year, in addition to 600,000 heads of sheep ready to be slaughtered and imported from Sudan, Australia, Romania, Uruguay, Azerbaijan, Syria, Ethiopia, Djibouti, Bulgaria, Moldavia and others. However, the whole market is not well-organized or controlled by the government or private sectors as trade is fundamentally based on weak regulations and standards. Furthermore, pricing strategy is not committed to input costs, local husbandry practices are poor and mixed with other international breeds. The government’s fluctuating policy also has a negative impact. For example, Government stopped exporting lambs from Jordan which caused losses for both sheep traders and producers due to low prices offered by local buyers. On the other hand, fresh milk is supplied with low prices and producers are controlled by traders, whereas 60% of dairy products are consumed in Jordan. In fact, it is rare to find factories or many processors purchase significant quantities of powder milk using local procured milk. Imported powder milk has been completely controversial because it is considered as a subject to lower tariff measures in order to keep consumer prices low.

**Feed.** There are two main types of feeding sheep in these six locations. Nutrition is based on intensive system and semi-intensive system. In all cases, small producers purchase feeds with a high percentage all-round the year? rather than natural and green areas. Barley, bran and a small percentage of straw are the main feed types. These materials are grounded and mixed in certain amounts by feed mills. For example, 100 kg of these materials are needed to feed 100 sheep heads. The 100 kg contains 50 kg of barley, 40 kg of barn and 10 kg of straw. Except straw, the source of all materials are government centres licensed by the Ministry of Industry, Trade and Supply. In fact, produces are not satisfied with the quantities and qualities of the feeds. The feeds are controlled by the government and supplied with low quantities per head on a monthly basis, from limited sources which are not sufficient to meet the daily demand of the producers. Low qualities of the feeds are
existed in all locations where many insects, damages, rats and rotten seeds are visible. Surprisingly, the feeds' price in local markets is lower than the peer obtained and supported by the government centres. This point has been confirmed by many producers who have admitted that they buy sheep feeds for 140 JD/ton instead of paying 175 JD/ton to the government centres.

Grazing. Grazing reflects 20% of total feeding which is very limited in all governorates. Production systems vary from one sheep producer to another according to the availability of grazing, the financial capability of feeds and the technical knowledge. The essential system for sheep is the semi-intensive system where they partially depend on natural grazing and on crop by-products. They move to land adjacent to the fields, and return to spend the winter term around the houses where they survive on the feed given to them. However, grazing period is only possible in the spring term for 4 months (March-June) with low quantities available and limited areas. In many cases, heads are kept either at zero grazing or limited grazing husbandry systems where supplementary feeds are supplied as required. For example, either rented areas or risky grazing in others' lands and also low productivity of grazing lands are existed in some governorates, while other governorates has no availability of grazing. In addition, and in respect of the health issues, grazing is only allowed by obtaining specific licenses issued by the government. Even though the number of sheep is increasing year-by-year, their surface area for natural grazing is decreasing at an alarming rate. The reasons are the urban development and the climatic conditions such as the drought seasons that has been affecting the country in the past years.

Breeding. Breeding programs are nil in all governorates. In general, breeding programs are only conducted by the government because of the lack associations for animal improvement or breeding private companies. Breed improvement practices are very limited and mainly conducted at the governmental stations. The main constraints in implementing conservation programme in Jordan are the lack of information about the risk associated with breeds, and their genetic potential and productivity. Lack of fund and well-trained technicians for the new technologies are additional constraints. A few cases of breeding are available but these cases are kept privately and confidentially.

Watering. The source and the cost of water purchased for animals are problematic. Sources are controlled by water traders and usually supplied with expensive prices. The government is not providing sheep producers with any financial support or price reduction. This is why producers have to buy their needed water quantities with similar prices of water supplied to the industries and household usage. As a result, limited water source can cause much more diseases and lead to lower productivity in various aspects.

Health Services. Lack of health technical support and skilled manpower were also identified as production and marketing constraints. The number of technical experts is also limited because most of them moved outside Jordan for the purpose of obtaining a secured job with higher income. The current experts suffer from shortage in the cutting-edge knowledge, advanced skills and modern technology. All governmental centres provide producers with 2-3 types of vaccinations. However, producers usually buy all types of required treatments in spite of their high costs and the lack of knowledge related to the symptoms and diagnosis of animals' diseases.

Logistics. All producers have traditional infrastructure and logistic facilities for raising up the sheep herds. The stables are based in open areas which are partially shaded to protect animals from the high temperature. In respect of feeds and weather changes, herds are being moved from area to another either physically or by vehicles (in a few cases). This might resulted in animals' injuries, damages and losses. The weak quality and quantity of infrastructure is related to barns, troughs, water tanks, old-fashion equipment, feeding tools and producing different goods/products for different customers. The lack of dairy technologies such as storage and cooling facilities could lead to milk spoilage as a result of milking process. The shortage of adequate transportation and cooling infrastructure in rural areas might be resulted in losing large quantities of milk. Due to the high costs incurred in the process of milk' collection and cooling, it is highly important that larger volumes are handled on time to reduce any additional costs of transactions.
7. **Key Interventions**

**Feed Management.** Each of feed production, feed quality and feed manufacturing are problems of paramount importance in order to achieve an efficient management of feed costs. Presently, most of the feeds are imported which are not only costly but also highly unreliable in terms of the supply and availability. Once the existing opportunities of grain feed production are employed, fodder production and manufacturing could be enhanced in the country. This will result in reducing imports, enabling the price reduction as well as ensuring the quality and availability. It is reported that inadequacy of feed (quantity and quality) to sustain lamb and milk production is one of the major constraints.

**Breed Management.** Jordan suffers from lack associations for animal improvement/breeding centres and private companies. Implementing the tools related to development of breeds is very limited and mainly at the governmental stations. The main constraints in implementing conservation program in the country are the lack of information about the risk associated with breeds, and their genetic potential and productivity. In fact, there is no specific plan as this will be resulted in mixing breeds at the farmer levels with no detailed information about degree of crossbreeding and breeds involved. New management of breeding plans could be built on animals importing in respect of their records from the origins and imported semen. A highly recommended intervention is to develop a stable breeding centre with the collaboration of MoA, private sector and farmers.

**Watering and Water Management.** Source of water is a serious factor which could hinder herd watering and cultivation of both irrigated forage and dairy feed. Under rainy conditions, in areas of more than 350 mm of rainfall, forage crops could be grown in association with cereals, in rotation with cereals, or replacing cereal crops with a forage legume during the fallow year. In addition, vegetable residues, by-products, grasses and weeds are fed by livestock in irrigated areas. Agreements with the government (MoA, NCARE etc.) could lead to dynamic solutions and support farmers in some of these six locations to achieve more efficient water harvesting, wells and water processing. This will be resulted in enhanced feed production and watering.

**Management of Farming and Health Services.** Record keeping, costs and benefit analysis are important sides to be managed by skilled members of the farm. Producer's level of education, producer's farming experience, producer's contact with an extension services and herd size are the essential determinants of dairy farms. Technical efficiency could be improved through provision of education, training and orientation of the farmers towards perfect farming practices. More education will be crucial in order to enhance technical efficiency. Improving farmers' access to extension services is highly required. Since a variety of diseases affecting dairy sheep, farmers should have the capability to keep diseases under control before they negatively affect both the lamb and milk production. As animals are affected by parasites and diseases, this will be resulted in producing lambs and fresh milk less than the usual production.

**Management of Loans and Financial Support.** A new opportunity for sheep producers who are willing to expand their herds should be available through a National Fund Committee. This is to assist the small producers in the six locations by strengthening and enhancing the production, and marketing both sheep and their products. The purpose of the fund is financing projects that are beyond the farm gate. Small producers have effective ideas which should be implemented in their businesses to boost lamb and milk production. Feed, breeding, health care, stable requirements and advanced tools are all to be obtained by loans and financial funds. Women under micro-business are also in need for small loans, so they could promote fattening units and dairy processing units which will be resulted in a higher generated income.

**Cooperatives and Logistic Centres.** To develop and strengthen the viable sheep cooperatives in all the six study-subject locations. This should be arranged under legal framework and a feasibility study, thus it could achieve enhancements for small producers with more organized and efficient work. This could also enhance the economic status of rural farmers, women and youth. A variety of sheep producers, sheep traders, dairy processors, and service providers might be appointed as members of the cooperatives where they can obtain an improved knowledge management, market analysis, know-how, feed management and many other benefits. In addition, lack of production and marketing infrastructure such as feed sources, organized wholesales markets, quality control, chilling tanks and
Transport vehicles could lead to a more complicated problem. Lack of dairy technologies such as storage and cooling facilities might be resulted in milk spoilage after the milking process. The shortage of adequate transportation and cooling infrastructure in rural areas might be resulted in losing large quantities of milk. Due to the high costs incurred in the process of milk collection and cooling, it is highly important that larger volumes are handled on time to reduce any additional costs of transactions. A well-organized dairy infrastructure especially storage facilities, methods of milk transportation and milk products is essential to improve the growth and development of dairy production.

**Linkages of Large Factories.** There are many large dairy factories in Jordan which have the required capacity to produce thousands of tons of pasteurized milk, yogurt, labneh, various types of white cheese, yellow cheese, processed cheese and cream cheese. In line with those factories, emerged hundreds or even thousands of small processing units “mainly linked with the labbans”, produce significant amounts of yogurt, labneh, white cheese and other outputs by employing reasonable and simple means, and then sell all these products locally. These units have been started as farmers who had the willing to obtain more money by selling their milk or who wanted their milk to be collected on a regular basis. Upon their success, they became milk collectors functioning in absorbing not only their milk, but also the milk production of a certain number of other local small farmers or even from other nearby governorates. The entire idea is linking those processors with the factories through a formal agreement which could achieve sustainable mutual interests for both sides.

Processors identified that packaging and sterilization should be improved to provide producers and processors with the appropriate skills through applying simple methods of pasteurization and sterilization. It is rarely to find factories or many processors purchase significant quantities of powder milk using local procured milk. Imported powder milk has been completely controversial because it is considered as a subject to lower tariff measures in order to keep consumer prices low. The only way to increase dairy productivity is increasing the current tariff on imported powder milk by the government, which is unlikely due to WTO. However, high international dairy commodity prices are appointed to increase powder prices even higher than increasing in such tariff. Establishing a proper milk market could be an advantage to control the milk flow amongst the chain actors and also to create a pricing policy amongst them.

**Market Chain Governance.** The market value chains require a certain coordination between market actors in order to create market value with high efficiency, products with a certain quality, compliance with standards and knowledge about final consumers. In order to meet these requirements, you should configure the working relationships and networks of vertical and horizontal interactions to find a technique for the exchange of products and information. Consequently, you should form the chain which would be able to find competitive advantages of products from initial production to final usage. Management of the power between suppliers and buyers, mainly focusing on the existing coordination mechanisms, might enable the flow of products and information in the value chain of products. In addition to retain the quality of relationships for the purpose of maintaining partnerships either in the same chain or with service providers and regulatory institutions. For instance, producer-consumer database should be available via establishing a national product map, regular exhibitions and trade fairs which could be alternative options to increase awareness of sheep products. Finally, trading (import and export) sheep products should be linked based on a comparative advantage with other countries.
Working Paper 2: Access to Financial Services
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Currency and Equivalent Units

As of March 31, 2017
Currency Unit = Jordanian Dinar (JOD)
USD 1 = JOD 0.71

Abbreviations and Acronyms

ACC  Agricultural Credit Corporation
AFESD  Arab Fund for Economic and Social Development
ATM  Automated teller machine
ARMP II  Agricultural Resource Management Project – Phase II
CAMEL  Capital adequacy, Asset quality, Management, Earnings, Liquidity
CBJ  Central Bank of Jordan
CGAP  Consultative Group to Assist the Poor
DEF  Development and Employment Fund
DRC  Danish Refugee Council
EBRD  European Bank for Reconstruction and Development
EUR  Euro
FSP  Financial service provider
GDP  Gross domestic product
GIZ  German International Cooperation
IFAD  International Fund for Agricultural Development
IFC  International Finance Corporation
IMF  International Monetary Fund
JOD  Jordanian Dinar (local currency)
JLGC  Jordan Loan Guarantee Corporation
KD  Kuwaiti Dinar
MENA  Middle East and North Africa
MFI  Microfinance institution
MIX  Microfinance Information Exchange
MOPIC  Ministry of Planning and International Cooperation
MSME  Micro, small and medium-sized enterprises
NPL  Nonperforming loans
PAR  Portfolio at risk
PFI  Participating financial institution
PMU  Project Management Unit
PPI  Progress out of Poverty Index
REGEP  Rural Enterprise Growth and Employment Project
ROCA  Risk management, Operational controls, Compliance, Asset quality
SDR  Special Drawing Rights
SIGHT  Small Ruminants Investment and Graduating Households in Transition Project
SLA  Subsidiary Loan Agreement
SME  Small and medium-sized enterprise
TA  Technical assistance
USD  United States Dollar
WB  World Bank
YARDP  Yarmouk Agricultural Resources Development Project
1. Introduction

According to IFAD's Rural Finance Policy (2009), developing inclusive rural financial systems and fostering innovations to increase the access of poor and marginalized women and men to a wide range of financial services is central to IFAD’s mandate. These goals are especially relevant in the context of a changing global economy that is facing challenges linked to financial crises, volatile food and agricultural commodity prices, the perils of climate change, as well as the recent refugee crisis. IFAD focuses on development of and support to diverse, viable financial service providers that increase the long-term access of poor rural people to a wide range of financial services.

IFAD applies six guiding principles in its rural finance interventions: (i) support access to a variety of financial services; (ii) promote a wide range of financial institutions, models and delivery channels; (iii) support demand-driven and innovative approaches; (iv) encourage – in collaboration with private sector partners – market-based approaches that strengthen rural financial markets, avoid distortions in the financial sector and leverage IFAD’s resources; (v) develop and support long-term strategies focusing on sustainability and poverty outreach; and (vi) participate in policy dialogues that promote an enabling environment for rural finance.

These binding principles should be applied at the micro level, working with retail rural finance institutions and beneficiaries; at the meso level, focusing on financial infrastructure, such as second-tier institutions, and technical service providers; and at the macro level, assessing the policy, legislative, regulatory and supervisory framework.

The present Working Paper describes a proposed approach for the Livelihood Investments and Access to Financial Services Component (Component 2) of the Small Ruminants Investment and Graduating Households in Transition Project (SIGHT) in the Hashemite Kingdom of Jordan.

2. Financial Sector, MSME and Agricultural Finance in Jordan

The financial system in Jordan includes banks, insurance companies, financial intermediation and services companies, exchange companies, microfinance institutions (MFI), specialized credit institutions and other credit institutions. The Central Bank of Jordan (CBJ) is the supervisor of the banking sector and foreign exchange sector, as well as the microfinance institutions that were included under CBJ’s supervisory perimeter in 2015. The Ministry of Industry, Trade and Supply and Amman Stock Exchange are responsible for monitoring and supervising insurance companies and financial intermediation companies, respectively. The other credit institutions are registered at the Ministry of Industry, Trade and Supply, but have no dedicated supervisory agency.

Jordan’s financial system is stable and demonstrates healthy financial performance indicators. As will be presented below, the country enjoys a sound and solid banking system that is capable of withstanding the shocks and high risks due the high and satisfactory levels of capital, liquidity and profitability. Jordan is also home to dynamic, high-quality microfinance sector that works to meet the needs of lower-income people in the country.

At the same time, neither the banking sector nor MFIs are focused on agricultural lending, as it has been traditionally perceived as highly risky and unprofitable. Banks and MFIs have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance

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178 In February 2016, the Cabinet of Ministers of Jordan approved transferring the regulatory function of the Insurance sector to CBJ, with the regulatory function to be transferred within a year and the updating of the regulatory framework for the insurance sector to be completed within two years.
products. On average, the share of agriculture in the banks' portfolio is about 3%, and in MFIs' portfolio – about 1%,\textsuperscript{179} though both banks and MFIs work in rural areas.

\subsection*{2.1. Banks}

Compared to the other countries in the region, the relative size of the banking system in Jordan to the size of the economy is considered large. The banks' assets reached JOD 45.2 billion at the end of 2015 representing 169.7% of GDP – the fourth highest ratio amongst selected Arab countries after Qatar, Lebanon and United Arab Emirates.

There are 25 banks working in Jordan. The concentration in the banking sector in Jordan is relatively high. The assets of the largest 5 banks represent about 53.9% of the total assets while the assets of the largest 10 banks represent 75.7% of the total banks’ assets at the end of 2015.

Jordanian banks enjoy solid financial performance indicators in all key areas: they are liquid, stable, profitable, and adequately capitalized. The liquidity ratios at the end of 2015 indicated that the liquidity position of the banking system is sound: the share of cash and cash balances to total assets reached 28.7% at the end of 2015 compared to 27.5%, at the end of 2014, and highly liquid assets composed about 51.8% of total assets at the end of 2015 compared to 52.0% at the end of 2014, reflecting a relative stability in the level of banks’ liquidity. The average indicator of the legal liquidity ratio mandated by CBJ at the minimum level of 100% is 151.3% in 2015. The asset quality of the banks is good and has been improving over the last few years: the ratio of non-performing loans (NPL) to total loans was 4.9% in 2015 as compared to 7.7%, 6.8% and 5.6% at the end of 2012, 2013 and 2014 respectively. The return on assets was 1.3% in 2015, and the return on equity – 10.3%. This represents a slight decline compared to the previous year (1.4% and 11% respectively) mainly due to the increase in the tax rate on banks’ income from 30% in 2014 to 35% in 2015. The banking system in Jordan has a high capital adequacy ratio that is the second highest in the MENA region (after the United Arab Emirates) ranging between 18% and 21% during 2007-2015. This is higher than the limit established CBJ of 12%. The capital adequacy ratio increased to 19.1% at the end of 2015 from 18.4% at the end of 2014. Overall, based on the results of various stress tests, the banking system in Jordan is resilient and is capable of withstanding shocks and high risks.

The banks' aggregate loan portfolio is JOD 21.1 billion at the end of 2015 representing 46.8% of banks' total assets as compared to 43.2% at the end of 2014. The largest portion of credit is extended to large companies – about 38% of the total portfolio as of year-end 2015, though this figure has been on a downward trend from 50.7% in 2010. Credit extended to the government and the public sector increased from 4.1% in 2008 to 12.9% in 2015. Loans to household and real estate sectors are 22.7% and 19.8% of the total portfolio, respectively. The share of loans to SMEs declined to 7.3% of the total portfolio at the end of 2015 compared to 8.5% at the end of 2014. The latter indicator is lower than the MENA region’s average that ranges between 20-25%.

There are several international institutions’ projects aimed at increasing access to financial services to SMEs and micro businesses, such as those by the Arab Fund for Economic and Social Development (AFESD), European Bank for Reconstruction and Development (EBRD), the World Bank (WB) and others. These projects have been largely successful showing banks’ interest in expanding this business line (see Section \textit{International Organizations’ Projects on Financial Inclusion, MSME and Rural Finance Support in Jordan}).

\textsuperscript{179} Information received during the project design mission.
2.2. Microfinance Institutions

Jordan is home to a dynamic, professional microfinance sector. Microfinance has been developing in the country since 1994 with a launch of a pilot lending scheme in Amman. Today the industry is comprised of 10 professionally run institutions, most of which follow global best practices and are self-sustainable. Eight out of 10 MFIs are members of Tanmeyah, the local microfinance association.

The aggregate loan portfolio of the MFIs has been growing at about 20% per year since 2013. Such high growth rates are a clear indication of the demand for the products and services of the microfinance industry. The following are key aggregate indicators of the state of the microfinance sector in Jordan as of the second quarter of 2016 representing excellent performance of the Jordanian MFIs:

- Number of active borrowers: 371,584
- Number of active loans: 387,512
- Total gross loan portfolio: JOD 194 million
- PAR over 30 days: 1.5%
- Write-off rate: 0.5%

In addition to successful financial performance, Jordanian MFIs have a strong social focus. The average loan balance of the MFIs is around JOD 500. MFI FINCA, for example, does an over indebtedness monitoring of all of their 26,000 borrowers. Another MFI, Microfund for Women, has 96% of women among their active borrowers and tracks the Progress out of Poverty Index (PPI, based on an international scoring methodology) of all of their 124,000 clients. A newcomer in the microfinance market, Islamic MFI Ethmar registered in 2015, offers Sharia-compliant financial products that are in high demand among lower-income people, especially those living in rural areas. After one year of operations, Ethmar has over 1,000 active clients.

MFIs offer both group and individual lending, with average loans ranging between JOD 400 and JOD 1,000, at 1-1.5% flat interest rate monthly resulting in about 24-36% p.a. effective interest rates depending on a product. Most of their loans are short-term with monthly repayment schedules, but some of them also work with SMEs and provide longer-term loans (one such example is MFI Vitas that is also engaged in agricultural lending).

MFIs consciously target their services to the borrowers from outside the capital city of Amman as a contribution to social and economic developments across Jordan: 69% of their borrowers are located outside Amman. The number of MFIs’ borrowers outside Amman grows at a faster pace: the growth rate of borrowers inside Amman was 6% in 2015 while outside Amman it was 11%.

According to Tanmeyah, while Jordanian MFIs have been very successful in lending to urban and peri-urban areas, they have limited experience in agricultural lending. The current share of agriculture in their aggregated portfolio is about 1%. This is both a challenge and a potential for expanding their portfolios in rural areas of the country. At the same time, as noted above, most of the MFIs already have presence in rural areas and some of them currently develop strategies and products to expand their offering by including agricultural finance products (MFIs Tamweelcom and Ethmar are notable examples).

Currently the MFIs in Jordan are being registered with the CBJ as their new regulator and supervisor, in accordance with the new microfinance regulations enacted in mid-2015. MFIs have a transitional period of two years (i.e. by mid-2017) to comply with CBJ’s licensing and minimum capital requirements. CBJ expects to license the majority of the MFIs by the deadline as MFIs are not expected to have difficulties complying with the requirements.

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180 Unless noted otherwise, the statistical data on the microfinance sector in this section is based on information provided by the MFI Association Tanmeyah.
182 According to CBJ, it may take until the end of 2017 to fully license all MFIs.
2.3. Government Providers of Financial Services to MSMEs and Agricultural Businesses

Unlike banks and MFIs, government providers of financial services to MSMEs and agricultural businesses – Development and Employment Fund and Agricultural Credit Corporation respectively – cannot boast good financial performance. They are heavily subsidized institutions focused on delivering credit to specific target groups yet with almost no mechanisms to ensure targeting and very weak loan analysis, internal controls and monitoring systems. These two organizations are also non-transparent as their audited financial statements are not publicly available.

Development and Employment Fund (DEF)\(^\text{183}\) is a government organization that has been providing both wholesale loans to lending entities (MFIs, banks, associations) and retail loans to micro and small enterprises since 1991. DEF’s wholesale loan amounts are up to JOD 1 million lent at 6% p.a., and their retail loans are disbursed through 7 programs and range from JOD 2,000 to JOD 75,000 provided at about 8% p.a. In 2016, DEF had outstanding loan balances of 4 MFIs and served 38,000 retail borrowers of whom 68% were women. Their outstanding retail loan portfolio was about JOD 119 million.

In July 2016 DEF launched a new Group Lending for Self-Employment Program worth of JOD 25 million. Under this program DEF has been providing loans to young people (between 22 and 45 years old) to support income-generating projects in all economic sectors. The loans are provided at highly concessional terms of up to 10 years, with a grace period of 12 months, at 2% p.a. with monthly payments, both to individuals (up to JOD 5,000) and groups of borrowers (up to JOD 30,000 per group, secured by a group guarantee and no additional collateral).

Being both wholesale and retail lender presents a conflict of interest for DEF. According to DEF’s strategy for 2016 – 2020, DEF should gradually withdraw from retail lending in the amounts below JOD 5,000 and focus on wholesale lending only, thus becoming a specialized apex institution. However there is no evidence of DEF’s moving in this direction. For example, in 2016 DEF commissioned a special research to see the implications of its withdrawal from the retail lending (the results should be available in 2017) and potentially justify its continued engagement in retail lending. DEF no longer has a dedicated wholesale lending department which was dissolved in 2012. Since that time DEF has not issued any new wholesale loans (the MFIs’ balances date back to 2012) and has not tracked the performance of the MFIs. Finally, as the implementing partner for the Rural Finance component of IFAD’s Rural Enterprise Growth and Employment Project (REGEP), DEF has not started any activities (either retail or wholesale) or implemented any recommendations of the IFAD’s supervision mission held in September-October 2016 (see Section Lessons Learnt from IFAD’s Previous Projects in Jordan).

The financial performance of DEF has been very poor: according to a report prepared by German International Cooperation (GIZ), in 2014 about 70% of the total DEF’s portfolio were in arrears, with portfolio at risk (PAR) over 60 days at the level of 35%. In 2015, per GIZ, PAR over 60 days at DEF rose to 46%. The financial information available at DEF is limited and internally inconsistent.

DEF is not integrated into the Jordanian microfinance industry. Despite repeated invitations in the last 3 years, DEF has not yet joined Tanmeyah, the local microfinance association, and stopped providing data to the MIX Market, the global information platform on microfinance, in 2012. DEF and MFIs have complicated relationships due to an image that DEF has in the market. Several MFIs interviewed are not interested in borrowing from DEF due to its bureaucratic procedures.

Agricultural Credit Corporation (ACC)\(^\text{184}\) was founded in 1959 and is based in Amman. ACC is a specialized government organization providing primarily retail loans to farmers and a small number of wholesale loans to farmers’ associations through its 23 branches and 3 regional offices. ACC’s loans range from small amounts (no minimum limit) to JOD 150,000 provided for a term of 2 to 12 years at a rate of 4-8% p.a. According to ACC, 80% of their loans are below JD 10,000. ACC has over 100,000 active borrowers and a loan portfolio of about JOD 125 million.

\(^{183}\) The analysis of DEF is done based on self-reported information and available public documents, as well as information collected during meetings with Jordanian stakeholders.

\(^{184}\) The analysis of ACC is done based on self-reported information.
Some of the ACC loans are interest-free as there is a government program providing for interest rates subsidies. ACC admitted to having no special targeting strategy to identify the recipients of these loans.

ACC has no financial performance information readily available. Per ACC, their portfolio at risk indicator is around 19%. This may be under-estimating the actual figure as ACC cannot write-off non-performing loans and they should still be shown as part of the portfolio at risk.

ACC does not provide group loans or loans without hard collateral (such as land or house) or two notarized guarantors with official salaries. According to ACC, the features of their loan products are not linked to agricultural businesses’ cash flows: ACC relies on the presence of a stable salary for loan repayments and offers fixed repayment schedules with either monthly or annual repayments. About 40% of all ACC loans are repaid through automatic deduction of payments from borrowers’ salary accounts.

ACC is not interested in relaxing its requirements to accommodate for the needs of IFAD’s target group.

IFAD’s prior experience with ACC’s participation in IFAD’s projects had very limited success (see Section Lessons Learnt from IFAD’s Previous Projects in Jordan).  

2.4. Financial Sector Infrastructure of Relevance to MSME and Agricultural Lending

Central Bank of Jordan (CBJ), in addition to a traditional goal of maintaining monetary and financial stability, has a goal of promoting the sustained economic growth and social development in Jordan. There is a specialized unit within CBJ headed by the head of the Financial Stability Department and comprising representative from the Data Analysis Division, the Studies and Licensing Division, the Legal Department and Investment, and the Foreign Operations Department (in total, 6 staff) that functions as a wholesale lending facility for banks and MFIs. According to CBJ, it has attracted about USD 320 million in funding to the MSME sector in the country in 2015. The wholesale facility of CBJ has been managing funding of MSME development projects of several international institutions (such as AFESD and World Bank – see Section International Organizations’ Projects on Financial Inclusion, MSME and Rural Finance Support in Jordan). In 2015, CBJ extended funding to banks at 1.75% p.a. for on-lending to MSMEs at market rates (4.25-6%).

Credit Information Agency (Credit Bureau). CBJ issued a license to the first credit information agency in Jordan in December 2015. The major shareholder of the credit bureau is CRIF, a leading international provider of banking credit information and global technology solutions, with 76% of shares. The credit bureau platform system gathers positive and negative credit information on individuals and businesses from eligible Jordanian lending institutions, banks, MFIs, telecommunication companies, and retailers. As of October 2016, 75% of Jordanian banks were members of the credit bureau, and data contributed to the bureau covered 94% of subjects and active contracts.

The centralization of credit information is expected to speed up the lending processes and facilitate access to credit for more businesses and consumers by improving lending processes and promoting responsible decision-making. The credit bureau is expected to help banks move from a more traditional approach, where credit is mainly granted through collateral, to a more advanced and automated model based on credit references. As a result, lenders should be able to deliver financial services at significantly reduced costs and expand credit to wider segments of the economy.

Jordanian Loan Guarantee Corporation (JLGC) was established as a public shareholding company in 1994 with a paid up capital of JOD 7 million. JLGC capital grew to over JOD 29 million by the end of 2016. The mission of JLGC is to enhance sustainable economic growth in Jordan through improving the

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186 http://www.cbj.gov.io


credit environment for economically viable small and medium-sized enterprises and by providing credit guarantees to national exporters.

From one SME guarantee program in the past, with support from the World Bank (see Section World Bank), JLGC has expanded its offer to include 5 special programs tailored to improve MSME access to finance covering 70-85% of loan amounts: SMEs loan guarantee; export and domestic credit insurance; micro business loan guarantee; Islamic financing guarantee; and financial leasing guarantee. As of the end of 2015, the guaranteed portfolio of JLGC was JOD 67.8 million granted to more than 3,500 borrowers. JLGC has been actively collaborating with banks – participants of the World Bank MSME Development for Inclusive Growth Project – by providing guarantees to their borrowers (see Section World Bank).

Though JLGC formally does not provide guarantees for agricultural businesses, there is evidence of JLGC's guarantees provided to small rural businesses and livestock purchase.


According to the G20 Global Partnership for Financial Inclusion, financial inclusion is measured in three dimensions: (i) access to financial services; (ii) usage of financial services; and (iii) the quality of the products and the service delivery. The state of financial inclusion in Jordan is described per these three dimensions below.

3.1. Access to Financial Services

The dimension of access covers physical and mobile points of service as well as interoperability of points of services. According to IMF, in 2015 Jordan had 18.26 bank branches per 100,000 adults. These are good indicators of access – well ahead of the country's neighbours Egypt and Saudi Arabia with 4.65 and 8.93 branches respectively, and slightly behind Israel with 20.06 branches. (To compare, in the developed countries such as France and USA the number of bank branches per 100,000 adults is 37.52 and 32.87, respectively, as of 2015.) In terms of the number of ATMs, Jordan had 29.22 ATMs, though well behind Saudi Arabia and Israel with 76.46 and 101.47 ATMs per 100,000 adults, respectively.

In December 2013, CBJ published Mobile Payment Services Instructions, providing the new regulatory framework for mobile money in Jordan. The new regulation allowed for an open and level playing field for banks and non-banks to provide mobile money services and prescribed a specific model for interoperability between providers. Specifically, it introduced JoMoPay (Jordan Mobile Payments), a national switching infrastructure with the purpose of enabling interoperability between mobile money services. At the beginning of 2016, Jordan became the first country in the Middle East and North Africa to have implemented interoperability of mobile money services. Mobile money services can expand financial inclusion in the country where usage of formal financial services is very low (see Section Usage of Financial Services) and enable humanitarian assistance and cash transfers to refugees.

3.2. Usage of Financial Services

The dimension of usage covers the usage of basic financial services by individuals – such as accounts, credit, savings, insurance and remittances. Looking through the usage lens, according to the World Bank, the level of financial inclusion in Jordan is lower than in many other countries: only 24.6% of Jordanian adults have an account at a financial institution. While it is higher than the average for the

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190 Based on information from Islamic International Arab Bank.
191 http://www.gpfi.org/sites/default/files/G20%20Set%20of%20Financial%20Inclusion%20Indicators.pdf
192 www.data.imf.org
MENA region (14%), by this indicator Jordan is far behind of its peer upper middle-income countries where over 70% of adults have an account (Table 1).

The usage of accounts is even lower among the lower-income (16.4%), women (15.5%), and youth (12.4%). Though quite many Jordanians save (29.2%), only very few of them save at financial institutions – 3.8% as compared to 32.2% in the upper middle-income countries. For borrowings, the picture is similar – about a third of Jordanians borrowed in the past year, with only 13.6% borrowing from a financial institution, and only 2.8% - borrowing for a farm of business.

Despite the interoperability of mobile financial services in Jordan, the take up of these services has been low: only 0.5% of Jordanians reported having a mobile account in 2014, and only 1.9% of people used their mobile phones to send remittances.

Table 1. Indicators of Usage of Financial Services in Jordan, 2014

<table>
<thead>
<tr>
<th>Middle East</th>
<th>Upper middle income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, age 15+ (millions)</td>
<td>4.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Middle East</th>
<th>Upper middle income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account (% age 15+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All adults</td>
<td>24.6</td>
<td>14.2</td>
</tr>
<tr>
<td>Women</td>
<td>15.5</td>
<td>9.2</td>
</tr>
<tr>
<td>Adults belonging to the poorest 40%</td>
<td>16.4</td>
<td>7.3</td>
</tr>
<tr>
<td>Young adults (% ages 15-24)</td>
<td>12.4</td>
<td>7.6</td>
</tr>
<tr>
<td>Adults living in rural areas</td>
<td>25.4</td>
<td>10.7</td>
</tr>
</tbody>
</table>

| Financial Institution Account (% age 15+) | | |
| All adults | 24.6 | 16.0 | 70.4 |
| All adults, 2011 | 25.5 | 10.9 | 57.4 |

| Mobile Account (% age 15+) | | |
| All adults | 0.5 | 0.7 |

| Access to Financial Institution Account (% age 15+) | | |
| Has debit card | 19.1 | 8.5 | 45.9 |
| Has debit card, 2011 | 14.7 | 5.5 | 38.5 |
| ATM is the main mode of withdrawal (% with an account) | 67.3 | 46.9 | 55.7 |
| ATM is the main mode of withdrawal (% with an account), 2011 | 55.1 | 42.4 | 42.8 |

| Use of Account in the Past Year (% age 15+) | | |
| Used an account to receive wages | 7.9 | 3.3 | 18.1 |
| Used an account to receive government transfers | 0.7 | 0.9 | 9.6 |
| Used a financial institution account to pay utility bills | 0.1 | 0.2 | 12.3 |

| Other Digital Payments in the Past Year (% age 15+) | | |
| Used a debit card to make payments | 6.4 | 3.3 | 19.9 |
| Used a credit card to make payments | 1.8 | 1.5 | 14.4 |
| Used the internet to pay bills or make purchases | 2.5 | 2.1 | 15.9 |

| Domestic Remittances In the Past Year (% age 15+) | | |
| Sent remittances | 11.4 | 9.3 | 15.4 |
| Sent remittances via a financial institution (% senders) | 9.4 | 3.7 | 32.2 |
| Sent remittances via a mobile phone (% senders) | 1.9 | 8.8 | |
| Sent remittances via a money transfer operator (% senders) | 4.1 | 19.7 | |
| Received remittances | 9.5 | 11.3 | 17.8 |
| Received remittances via a financial institution (% recipients) | 9.8 | 29.8 | |
| Received remittances via a mobile phone (% recipients) | 0.2 | 5.6 | |
| Received remittances via a money transfer operator (% recipients) | 15.6 | 17.9 | |

| Savings In the Past Year (% age 15+) | | |
| Saved at a financial institution | 3.8 | 4.0 | 32.2 |
| Saved at a financial institution, 2011 | 8.3 | 2.7 | 26.2 |
| Saved using a savings club or person outside the family | 15.2 | 11.5 | 4.9 |
| Saved any money | 29.2 | 30.5 | 67.2 |
| Saved for old age | 1.9 | 5.0 | 30.6 |
| Saved for a farm or business | 3.2 | 5.1 | 17.6 |
| Saved for education or school fees | 5.5 | 8.1 | 26.4 |

| Credit In the Past Year (% age 15+) | | |
| Borrowed from a financial institution | 13.6 | 5.6 | 10.4 |
| Borrowed from a financial institution, 2011 | 4.5 | 4.4 | 7.9 |
| Borrowed from family or friends | 17.4 | 30.7 | 24.0 |
| Borrowed from a private informal lender | 1.1 | 7.8 | 2.6 |
| Borrowed any money | 32.2 | 45.7 | 37.7 |
| Borrowed for a farm or business | 2.8 | 4.2 | 6.6 |
| Borrowed for education or school fees | 4.1 | 8.7 | 6.1 |
| Outstanding mortgage at a financial institution | 14.9 | 6.2 | 9.1 |

3.3. Quality of Financial Products and Service Delivery

The dimension of the quality of financial products and service delivery covers such aspects as financial knowledge and financial behaviour of consumers, financial consumer protection and costs of usage. According to a global survey by Standard&Poors Rating Services conducted in 2014, only 24% of adults in Jordan can be considered financially literate. This puts the country quite low in the spectrum of countries with the highest financial literacy rates (71%) and the lowest rates (13%). Worldwide, the number of financially literate people defined as those responding correctly to questions covering key financial concepts, is 33%. Thus Jordanians’ level of financial literacy is rather modest and the country is outperformed by its neighbours Iraq (27% of financially literate people), Saudi Arabia (31%), Lebanon (44%) and Israel (68%).

To address the issue, in 2015 CBJ initiated a project aimed at increasing financial literacy levels among Jordanians, including financial education in schools and universities, financial literacy messages via mass media, financial literacy for businesses, financial education at workplace, financial education for women and rural areas, and electronic financial education.

In the area of financial consumer protection, in 2012 Treating Clients with Transparency and Fairness Instructions No. 56/2012 were issued by CBJ, and in 2014 CBJ established a special division for financial consumer protection. Supported by the World Bank (see Section World Bank), CBJ is considering the establishment of a department or an independent unit tasked mainly with the financial consumer protection that would include protecting both banks’ consumers as well as the customers of the other financial institutions supervised (or to be supervised) by the CBJ – MFIs and insurance companies.

3.4. Jordan’s Commitment to Advancing Financial Inclusion

Jordan is well aware of the benefits of financial inclusion and has been demonstrating high commitment to its expansion. Financial inclusion is defined in Jordan as a “vision that reaffirms the basic tenet that all adults have the right to access loans, savings, payments and insurance services from formal financial institutions easily and at an affordable cost, besides maintaining the sustainability of the business of the financial service providers. The target is providing formal financial services for the excluded and deprived group instead of the unofficial alternatives.”

In its 2015 Financial Stability Report, CBJ mentions that the promotion of financial inclusion is not confined only to the spread of financial services to a larger group of people; it also includes offering quality and diversified financial services at reasonable costs which eventually helps attain sustainable comprehensive development. CBJ acknowledges the benefits obtained as a result of promoting financial inclusion at the macro-level, such as enhancing economic development and increasing employment rates; enhancing the stability of the financial system; reducing poverty levels through cutting down the costs of financial transactions, and supporting their capacity to cope with financial shocks and the fluctuations in their income and, hence, attaining social stability; increasing transparency to fight money laundering and the financing of terrorism; and increasing the financial access for the enterprises, especially SMEs.

In July 2016, CBJ became a member of the Alliance for Financial Inclusion (AFI) – a global organization on financial inclusion policy and regulation. Under AFI’s Maya Declaration (a statement of common principles regarding the development of financial inclusion policy made by AFI members), CBJ set a national goal of increasing financial inclusion from the current level of 24.6% to 36.6% of the adult population.

198 http://www.afi-global.org/maya-declaration
population by 2020 and, and over the same time, to reduce the financial inclusion gender gap in the country from 53% to 35%.

To achieve this, CBJ detailed 9 specific targets:

- Finalize the draft of the National Financial Inclusion Strategy by the end of 2017;
- Formulate comprehensive digital finance and MFIs financial consumer protection guidelines by 1st quarter 2017;
- Continue to champion the financial education program into the existing Jordanian school curriculum from class 7 to class 11 by 2020;
- Enhancing interoperability among the payments systems in the Kingdom by end 2018;
- Ensure efficient and responsible growth of the microfinance sector as part of the formal financial system;
- Provide the refugees and non-nationals with access to digital financial services;
- Ensure the provision of an enabling legislative and regulatory environment for digital financial services;
- Upgrade financial inclusion data collection and measurement to align with AFI's network to produce comparable indicators by 2018; and
- Increase the financial inclusion access of Jordan's youth (15-22 years) by 25,000 annually by 2020.

These ambitious targets represent a strong commitment of CBJ to advancing financial inclusion as well as the belief in the power and the importance of financial inclusion policy for the future development of the country.


4.1. Arab Fund for Economic and Social Development

The Arab Fund for Economic and Social Development (AFESD) has been active in Jordan since 1975 and has funded 47 projects for the total amount of over KD 543.6 (USD 1.79 billion), including 11 projects in agriculture totaling KD 101.8 million (USD 336 million). In July 2015, AFESD launched a Program to Support Small and Medium Private Sector Projects and Enterprises worth of KD 30 million (USD 99 million) aimed at facilitating access to finance by MSMEs, helping create new job opportunities to reduce unemployment and poverty rates in Jordan. This is a loan to the Central Bank of Jordan provided at 3% p.a. for a term of 22 years with a 5-year grace period, to be on-lent to banks and MFIs.

4.2. European Bank for Reconstruction and Development

The European Bank for Reconstruction and Development (EBRD) has funded 30 projects in Jordan for a total amount of EUR 894 million, with a current project portfolio of EUR 747 million. Among EBRD’s priorities for Jordan is direct and indirect financing of private enterprises in the corporate sector, with a focus on SMEs, improvements in the agribusiness value chain as well as energy and water use efficiency. EBRD aims at boosting the creation of high quality jobs, including for women to further develop a thriving private sector.

In 2014, EBRD launched Jordan MSME Framework – a project worth of USD 150 million that includes an unsecured loan facility to Jordanian banks for on-lending to eligible MSMEs in Jordan. The loan facilities are available in three currencies (JOD, USD and EUR), but the on-lending to the local MSMEs is done in

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201 http://www.ebrd.com/jordan.html
the local currency. The Framework offers an optional loan guarantee scheme, including a first loss tranche provided by the EBRD and a second loss guarantee provided by JLGC. In addition, EBRD is providing technical co-operation for capacity building to the partner banks. Under this project, EBRD has approved funding to three Jordanian banks – Bank Ali Etihad, Cairo Amman Bank, and Jordan Ahli Bank, in the amount of USD 20 million to each.

EBRD also offers business advisory services to MSMEs, covering specialized areas of expertise including strategy, marketing, organization, operations, technology, engineering solutions, quality management, financial management and energy efficiency and environment. EBRD involves qualified local consultants with the aim to build a strong, competitive market for business advice in each country. In Jordan, EBRD identified 123 local consultants meeting their quality standards. The duration of consultancy can be up to 6 months and is co-funded by EBRD up to 70% for micro and small enterprises and up to 60-65% for medium-sized enterprises. EBRD is currently considering offering free business advice to entrepreneurial Syrian refugees.

4.3. German International Cooperation

German International Cooperation (GIZ) has been working in Jordan since 1979. Since 2012, GIZ has been providing support to MOPIC and CBJ in implementing the national strategy for microfinance in the areas of regulation and supervision. Since 2015, GIZ has been implementing a European Union project providing support to 3 government entities – CBJ, MOPIC and DEF.

Specifically, GIZ were actively engaged in the development of a set of regulations of the CBJ covering MFI licensing and all areas of their activities (risk management, anti-money laundering etc.), CBJ supervision manual etc. as well as consumer protection regulations. In May 2016, CBJ and GIZ launched a joint Digi#ances Project aimed at improving access to remittances and other financial services through digital solutions especially for refugees and low-income Jordanians.

Working with MOPIC, GIZ has been supporting the development of the monitoring framework for the Jordanian National Policy Framework for Microfinance (issued by MOPIC in 2011 and prepared with TA from CGAP), including the development of key performance indicators, to monitor the implementation progress.

For DEF, GIZ has been providing extensive technical assistance to strengthen DEF’s retail policies and procedures and risk management, restructure DEF’s internal auditing policies and processes, improve human resource management, etc. (As noted above in Section 2.3, it appears that these changes are yet to be implemented by DEF.)

GIZ is a member of the Microfinance Steering Committee – a regular platform for microfinance stakeholders to meet and discuss policy issues where the manager of IFAD’s project REGEP also joined at the end of 2016, as recommended by the IFAD supervision mission.

4.4. United States Agency for International Development

USAID has a long history working in Jordan. In the area of MSME development, in partnership with the Overseas Private Investment Corporation, in 2012 USAID established the Jordan Loan Guarantee Facility of USD 250 million for a term of 10 years. The facility provides partial loan guarantees and technical assistance to mobilize bank financing for creditworthy but previously underserved SMEs.

The loan guarantee covers 60% of loan principal for businesses located in Amman and 75% of loan principal for businesses located outside Amman and for women-owned businesses regardless of location. Loans typically range from USD 25,000 to USD 750,000 with terms of up to 7 years (with the average

\[202\] https://www.giz.de/en/worldwide/360.html
\[204\] https://www.usaid.gov/jordan
A loan amount of about USD 200,000. USAID’s loan guarantee facility has been working with 7 partner banks: Arab Bank, Cairo Amman Bank, Capital Bank, Bank Al Etihad, Housing Bank, Jordan Ahli Bank, and Jordan Kuwait Bank and since inception has facilitated more than USD 73 million in loans to over 316 MSMEs, 30% of which are located outside Amman. 12% of these MSMEs are run by women. The loans guaranteed by the facility have supported over 5,900 jobs.

The facility conducts workshops for bank loan officers to build their capacity in applying SME credit underwriting and loan monitoring practices consistent with international best practices and provides technical assistance to its partner banks to help them institutionalize international best practices in SME credit in order to enable banks to reduce their over reliance on collateral – one of the main barriers to SME access to finance. Since 2012, USAID’s loan guarantee has trained over 230 bank staff members in best practices in SME credit analysis and has conducted workshops for over 720 SME business owners and managers to build their capacity in financial management.

4.5. World Bank

The World Bank’s (WB) Micro, Small, and Medium Enterprise (MSME) Development For Inclusive Growth Project for Jordan launched in 2013 has been highly successful. The objective of the project is to contribute to the improvement of access to finance MSMEs with a goal to ultimately expand employment opportunities through the development of the Jordanian private sector. Through WB also seeks to demonstrate how improved financial intermediation to MSMEs can lead to sustainable private sector jobs, development of entrepreneurship capacities and reduction of poverty, as well as contribute to overall economic growth.

The project was initially worth USD 70 million, with additional financing of USD 50 million approved in 2015 to be lent through the CBJ wholesale facility to banks and MFIs who, in turn, provide loans to MSMEs. By December 2016, the project disbursed USD 118.45 million to 12,222 MSMEs (with the initial target of 3,500 by 2020). Thus the average loan amount extended to MSMEs is about USD 9,692. There are 9 banks participating in the project (MFIs have not yet participated as they are going through a licensing process – see Section

2.2. Microfinance Institutions. About 65% of MSMEs financed are outside Amman. The banks charge between 4.25-6% interest on their loans to MSMEs under the project which makes these loans even cheaper than those offered by the government providers of financial services such as DEF and ACC (see Section...
Government Providers of Financial Services to MSMEs and Agricultural Businesses.

The World Bank also funds a USD 3 million Enhancing Governance and Strengthening the Regulatory and Institutional Framework for MSME Development Project (2014-2018). The project has three components: (i) strengthening credit guarantees schemes aimed at developing the Jordan Loan Guarantee Corporation's SME loan guarantee products and designing new ones that are tailored to SMEs; (ii) enhancing the consumer protection mechanism aimed at providing a supervisory and complaint resolution structure to support a reliable and strong consumer protection system and at promoting financial literacy in Jordan; and (iii) developing the regulatory and institutional framework for MFIs and non-bank financial institutions (NBFI) aimed at supporting policy and regulatory reforms to develop the NBFI and microfinance sector.

5. Description of Activities

5.1. Rationale and Objectives

As described in Section 3, the level of financial inclusion in Jordan is lower than in its peer upper middle-income countries. Access to loans for productive purposes is a challenge especially for rural residents. According to the World Bank Global Findex (2015), 13.6% of adults borrowed from financial institutions in Jordan; this is higher than in the country's peers in the Middle East and upper-middle income countries (5.6 and 10.4%, respectively). At the same time, only 2.8% of adults in Jordan borrowed for a farm or business – this is 1.5 and 2.4 times fewer than the respective share of adults in the Middle East and upper-middle income countries.

The issue of access to finance required for investment in a new microenterprise is among key challenges for low-income Jordanians and Syrian refugees living in local communities who have entrepreneurial potential but are currently unbanked due to the lack of collateral or limited opportunities to get formal start-up financing. There are many non-governmental organizations (NGOs) in Jordan working with the low-income and refugees by providing them with small grants or loans of USD 200-500 for entrepreneurial activities (such as CARE International, Jordanian Hashemite Fund for Human Development, The Jordan River Foundations and others), yet according to the Danish Refugee Council (DRC), these grants have been provided mainly for informal, home-based subsistence activities, and this market in Jordan is now near saturation. The provision of such small grants has not consistently led to the formalization of these microbusinesses or connecting the grant recipients with formal financial service providers. So while the activities of these NGOs may be a necessary first step to support emerging income-generating activities among the low-income and refugees, additional assistance and efforts are necessary to bring these activities to a new level and transform them into businesses that would be sustainable in the long term.

Access to finance is a challenge for formally registered SMEs, too. According to USAID, SMEs represent roughly 95% of all registered companies in Jordan, contribute 50% or more to GDP and provide employment to an estimated 60% of the Jordanian workforce. They are key to innovation and the engine of sustainable economic growth and job creation in Jordan. Despite the crucial role they play in Jordan's economic growth and SMEs' high demand for financing, SMEs have difficulties accessing the financing needed for start-up and growth. According to CBJ, in 2015 there were over 13,300 loan applications from companies, of which the vast majority – 10,200, or over 76%, were from SMEs, for a total amount of JOD 1.39 billion. While banks rejected 7.6% of loan applications from companies in 2015, for SMEs the rejection rate was much higher – 17.8% of SMEs’ applications were rejected as compared to 13.9% the year before. As noted earlier (Section 2.1. Banks), the share of loans to SMEs declined to 7.3% of the total banks' portfolio at the end of 2015 compared to 8.5% at the end of 2014. The latter indicator is lower than the MENA region's average that ranges between 20-25%.

206 http://documents.worldbank.org/curated/en/581621468284333633/pdf/PAD7340JO000En0Box382161B00PUBLIC0.pdf

207 DRC’s own program of providing small grants for income-generating activities includes 80% of home-based businesses, primarily food processing.

The lack of specialized agricultural finance products is an issue in Jordan. Though Jordan enjoys strong and capable banking and microfinance sectors, agricultural lending has not been a priority either for banks or MFIs as agriculture has been traditionally perceived as highly risky and unprofitable business. Banks and MFIs have little expertise and experience lending to agricultural businesses and generally have no specialized agricultural finance products. Only about 3% of banks’ and 1% of MFIs’ loan portfolios are in agriculture; but both banks and MFIs are interested in exploring this new area for them and have been active in rural areas (primarily providing loans for off-farm activities).

A rapid market research conducted in June 2017 in 6 target governorates through discussions with 6 focus groups of smallholder farmers (with about 20 participants in each group) further confirms the need for accessible and appropriate loan products meeting the needs of smallholders. Only about 5% of the respondents had experience getting loans for their agricultural and rural activities, almost all of them from ACC, while about 60% of the respondents expressed interest in borrowing if loan terms and conditions are appropriate. Those who borrowed from ACC mentioned that loans were provided based on the existing herd size (JOD 10 per animal) regardless of the actual needs of their businesses; as a result, loan sizes were too small (about JOD 1,000 on average) when the actual needs ranged between JOD 5,000 and JOD 10,000. The loans offered by ACC did not consider seasonality and sometimes were provided at an inappropriate time. As another barrier, focus group participants with borrowing experience mentioned strict collateral requirements of ACC.

All these factors present an opportunity for the IFAD’s SIGHT project to launch a new business line for Jordanian financial institutions by providing them with dedicated wholesale funding for rural and agricultural micro and small businesses, accompanied by specialized technical assistance to help overcome the stereotypes regarding this economic sector and build local capacity to serve it. This is also an opportunity to support economically active, entrepreneurial low-income rural residents, including Syrian refugees living in local communities, in starting new micro businesses or transforming income-generating activities into sustainable businesses through a proven structured approach – Graduation into Sustainable Livelihoods that combines elements of social protection, livelihoods development, and access to finance to protect participants in the short run while promoting sustainable livelihoods for the future (see below). The Graduation Approach will be piloted in Jordan for the first time.

The objectives of Component 2: Livelihood Investments and Access to Financial Services (USD 13.63 million) will be to provide support to households at different gradients along the poverty spectrum. This includes the highly vulnerable Syrian refugees, the local host communities and individual entrepreneurs in need of loans for their enterprises. The project will support the ultra poor and poor households out of extreme poverty to a more stable state through a comprehensive Graduation Approach that includes a holistic set of services such as consumption support, savings plans, livelihood trainings, and productive asset transfers. By investing in this multifaceted approach, the project will strive to eliminate the need for long-term safety net services. The target group of the graduation sub-component will be the Syrian refugees and Jordanian host communities. In addition, financial services will be provided for smallholder farmers and young men and women who have the risk appetite and capacity for micro and small enterprises to initiate or expand agricultural businesses and off-farm activities.

5.2. Subcomponents, Beneficiaries, Costs and Implementation Arrangements

The Livelihood Investments and Access to Financial Services Component of SIGHT will consist of two complementary subcomponents reflecting the two-pronged approach that will target the ultra-poor and poor rural residents, on the one hand, and low-income smallholder farmers and rural entrepreneurs, on the other:

a) Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods (USD 9.73 million) will target 3,650 entrepreneurial rural residents – vulnerable women and youth from among the Jordanian host communities and Syrian refugees with grant-based income-generating packages for on-farm and off-farm enterprises.
b) **Subcomponent 2.2: Lending Facility for Rural Businesses (USD 3.9 million)** will target 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement. The loans will be provided by professional financial service providers (FSP) – banks and microfinance institutions (MFI) experienced in working with micro and small enterprises in rural areas.

**Subcomponent 2.1: Grants for Graduation into Sustainable Livelihoods (USD 5.7 million).** This subcomponent will be based on a proven Graduation into Sustainable Livelihoods Approach that consists of a carefully sequenced, multisectoral intervention comprising social assistance to ensure basic consumption, skills training, seed capital, and employment opportunities to jump-start an economic activity, financial education and access to savings, and mentoring to build confidence and reinforce skills (Figure 1). This approach will address the key challenges faced by women and youth that include the lack of access to capital required for investment in microenterprises, lack of knowledge and skills, limited access to financial services and susceptibility to economic shocks. Some of these challenges are intensified for Syrian refugees who also face additional challenges such as lack of work permits and licenses as well restrictions on permissible occupations.

**Figure 1: Graduation into Sustainable Livelihood Approach**

According to CGAP, the Graduation Approach should lead with consumption support, either direct food aid or cash. Recent behavioral research confirms that unless immediate consumption needs are addressed, people make suboptimal economic decisions due to stress and a “tunneling” syndrome where their time horizons shorten to just managing the next crisis. Once the consumption needs have been sufficiently addressed, the Graduation Approach provides support for saving money (a vital tool for risk management), an asset transfer (usually in-kind assets such as livestock), skills training, and regular coaching and encouragement. The goal is for participants to “graduate” to a sustainable livelihood within a defined period of time (generally 18 to 36 months). Based on 10 pilots in 8 countries, CGAP reports 75-98% “graduation” rate for the beneficiaries of the Graduation Approach programs – entrepreneurial low-income people. Given the additional challenges related to circumstances of Syrian refugees (see Annex I: Syrian Refugees), the success rate of this subcomponent is expected at the level of 70% of “graduated” beneficiaries defined as those with sustainable business activity providing stable and sufficient household income.

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**Beneficiaries.** Under Subcomponent 2.1, livelihood packages provided to 3,650 beneficiaries will address the respective step(s) of the Graduation Approach based on the analysis of any prior assistance received by these beneficiaries (e.g. consumption assistance or any basic financial education training likely provided by local NGOs). The sub-component has USD 5.7 million available from existing sources and an additional USD 4 million will be mobilised to meet the financing gap.

This sub-component will benefit 3,650 vulnerable women, men and youth with grant based income-generating packages for on-farm and off-farm enterprises and employment opportunities. Two thousand six hundred and fifty graduation packages will be for the poor. Fifty percent of these packages will be for Jordanian host communities and fifty percent for Syrian refugees. One thousand packages will be for the extreme poor. Among the ultra-poor who will be targeted, 70% will be Syrian and 30% from Jordanian host communities. Both packages will be provided to 50% women and 50% men; of the latter, half will be youth (i.e. 25% of the total number of recipients). This subcomponent will help create 3,650 jobs through self-employment.

The type of package provided to beneficiaries will vary depending upon the classification of each household with the packages ranging from USD 3,000 for the extreme poor to USD 2,000 for the poor.

**Implementation.** The livelihood packages will be delivered by 2-3 competitively selected NGOs. One NGO will be selected to work only with the extreme poor. There are differences in the methodology and the size of the packages for the extreme poor and for the poor. Hiring separate NGOs to deliver the two different packages will be necessary to promote clarity and avoid confusion and conflict in communities. The package for the extreme poor will be USD 3,000. This package will include consumption support to protect households against shocks, psychosocial support through life-skills training and intensive coaching (weekly – monthly visits) over a period of 24-36 months. The graduation package for the poor will be USD 2,000. This assumes that consumption support is being provided through some other agency or that the household is at a level of poverty where consumption support is not required and a lower level of mentoring and coaching support would be necessary over a shorter period of time (monthly visits over a period of 6 to 12 months). Both packages also include the value of the productive asset to be transferred. An inclusion of women’s empowerment training will be required for both packages. In the life skills training and mentoring/coaching, nutrition awareness will be integrated.

The organizations selected will be tasked with selecting the intervention area in consultation with the Project Management Unit (PMU) according to pre-determined criteria, mapping and selecting beneficiaries, designing a customized consumption assistance and income-generation package for each beneficiary. The package will specify the level of consumption support, type of training, asset and working capital needed to establish a income generating activity In accordance with the package designed, beneficiaries would be provided with skills training, life-skills training, financial literacy, business development training and mentoring. Assets would be purchased by the implementing NGOs and working capital would also be provided as necessary. The selected NGOs will be required to track the beneficiaries over a sustained period of time to ensure their graduation. In the implementation of the subcomponent, implementing NGOs will be required to follow the CGAP Technical Guide to Graduation Approach. The NGO will also be required to synergize where possible with existing donor initiatives such as the Arab Women’s Entrepreneurship Fund which is using a private sector led approach to develop women’s home-based businesses in the livestock and handicrafts sector. In addition, the NGO where possible should link beneficiaries with initiatives providing health and education services, social security, etc.

For the selection of beneficiaries, PMU will collaborate with local NGOs with experience of working with Syrian refugees and low-income Jordanians to better define the profile of beneficiaries and to ensure the complementarity of the livelihood packages provided under the subcomponent to any prior assistance

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received by these beneficiaries. PMU will explore the creation of a working group consisting of these NGOs for potential cross-reference of beneficiaries and other information exchange. Collaboration with EBRD for free-of-charge business training for entrepreneurial Syrian refugees was explored and will be utilized where appropriate.

Expression of Interest in Grants for Graduation into Sustainable Livelihoods will be invited from NGOs. The NGOs expressing interest will then be invited to a two–day workshop detailing the Graduation Approach they will be expected to follow when formulating proposals.

Technical assistance for graduation implementation. Once implementing NGOs are identified, PMU will organize training on the fundamentals of the Graduation Approach by an experienced technical assistance provider specialized in graduation selected through competitive bidding. The TA provider will perform/contribute to the following tasks:

a) Two-day workshop on Graduation Approach for NGOs with an interest in implementing the Grants for Graduation into Sustainable Livelihoods;

b) Finalizing the TORs/call for proposals and assisting in evaluating the proposals from local NGOs;

c) Provision of training to local NGOs on the fundamentals of the Graduation Approach (including, potentially, community-based organizations);

d) Development of the implementation manual for the graduation subcomponent, including criteria and instructions for the selection of subcontractors (such as providers of technical assistance, training, mentoring etc.), unified reporting requirements for implementing NGOs;

e) Assistance to IFAD project/NGOs selected in beneficiaries selection for the graduation, as well as the development of the graduation plans for beneficiaries at the first stages of implementation;

f) Development of monitoring and evaluation framework, including the baseline assessment of the beneficiaries included in the program (the baseline survey can be subcontracted);

g) Follow-up throughout the implementation and provide advice to the project as necessary (both remote support and on-site visits); and

h) Assist in documenting the implementation progress and lessons learnt.

For the TA and implementation support, an amount of USD 1.43 million is planned to fund the mapping and selection of beneficiaries for the customized grant-based livelihood packages, skills training and the business development support and mentoring services. These funds will also be used to build the capacity of NGOs implementing the livelihood packages in implementing the Graduation Approach through specialised TA as described above.

Subcomponent 2.2: Lending Facility for Rural Businesses (USD 3.9 million) will target about 550 micro and small enterprises with loans for on-farm and off-farm activities, including loans for the purchase of small ruminants for breed improvement, feed supply and other ancillary activities. The main objective of this sub-component is to demonstrate to the commercial banking and microfinance sector that the agriculture sector is a promising sector for growth and that directing additional funds to it can help grow their business and meet the Government’s objective of increasing the growth rate in agriculture.

There is a strong local capacity to implement the proposed lending activities. Though Jordanian FSPs (banks and MFIs) have not had much experience working in agriculture, they recognize this as a sector with big demand and untapped potential. Both banks and MFIs in Jordan have solid financial standing and have started reaching into rural areas with various products for micro and small businesses. A notable example of this outreach is a successful World Bank MSME Development Project for Inclusive Growth implemented through the wholesale facility of CBJ. As noted earlier, since 2013, the Project has disbursed over USD 118 million in loans to 12,222 MSMEs through 9 banks, including Islamic banks.
offering Sharia-compliant products, with several banks on-lending to microbusinesses through MFIs.212 About 65% of the World Bank project beneficiaries are located outside Amman which aligns well with the objectives of Subcomponent 2.2. Average interest rates on loans to the end beneficiaries range between 4.25 and 6% per annum.

**Beneficiaries.** 550 micro and small enterprises with loans for on-farm and off-farm activities, including 30% of women (women-owned or women-managed businesses). Financial service providers (banks or MFIs) will be requested to provide loans to about 133 smallholders to improve small ruminants’ breed, as well as to 290 micro and 145 small rural businesses. These figures and loan purposes are indicative and will be presented to FSPs so as to orient them to this target groups, but ultimately FSPs will be able to provide loans to micro and small rural businesses based on the demand.

**Implementation.** Subcomponent 2.2 will be implemented through the CBJ wholesale lending facility. As presented in Section 2.4, this is a dedicated professional unit within CBJ that manages and monitors credit lines of international institutions such as the World Bank and Arab Fund for Social and Economic Development. CBJ will be assessing and recruiting a variety of local FSPs – banks and MFIs – to participate in the project. It will also monitor FSPs and provide reports on FSPs’ financial standing and project performance in line with IFAD’s requirements, including detailed statistics on beneficiaries reached (by gender, age group, region, economic sector etc.).

CBJ has been selected upon assessing a variety of options, including the provision of credit lines through ACC and DEF. A conclusion has been reached that the CBJ wholesale lending facility fully meets IFAD’s requirements and provides the optimal implementation mechanism. On the other hand, ACC and DEF do not fully meet IFAD’s requirements and neither they are currently interested in using the facility available under the project.

The advantages of the CBJ facility include:

a) Professional wholesale facility. This is a dedicated professional unit within CBJ that manages and monitors credit lines of international institutions such as the World Bank and Arab Fund for Social and Economic Development. It is capable of assessing (conducting due diligence) and recruiting a variety of local financial service providers (FSP) – banks and microfinance institutions – to participate in the project. It can also provide reports on FSPs’ financial standing and project performance in line with IFAD’s requirements, including detailed statistics on beneficiaries reached (by gender, age group, region, economic sector etc.).

b) Works with high quality financial service providers. FSPs working with CBJ under the World Bank project have the CAMEL rating not lower than 3, are fully financially sustainable and have the portfolio at risk over 30 days indicator below 4%. (IFAD’s requirement for portfolio at risk is below 5%). These are professional financial institutions licensed and supervised by CBJ.

c) Reaches IFAD’s target group. FSPs working with CBJ reach rural areas (over 60% of loans outside Amman), youth (over 80%) and offer Sharia-compliant products that are in high demand especially in rural areas. The World Bank MSME Development Project for Inclusive Growth implemented through CBJ has disbursed over USD 100 million in loans since 2013 to over 10 thousand micro, small and medium-sized enterprises through 12 banks, including Islamic banks (the average loan size is below USD 10,000 – JOD 7,100).

d) Low interest rates for the end beneficiaries. FSPs working through CBJ provide loans to micro and small enterprises at 4.25% – 6% per annum. These interest rates are not capped – FSPs are free to establish their own interest rates ensuring sustainable operations. There are also interest-free loans available, such as those provided under Sharia principles.

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212 While MFIs are eligible under the World Bank project, they are currently undergoing licensing by the Central Bank of Jordan. This process is expected to be completed by mid-2017.
e) No mandatory collateral. FSPs working through CBJ have reached an agreement with the Jordan Loan Guarantee Corporation to issue guarantees on loans to micro and small businesses.

f) Ability to enforce repayment. CBJ is the regulator and supervisor of banks and microfinance institutions and can enforce loan repayment.

IFAD’s requirements to participating financial institutions will be aligned with those of the World Bank and include additional requirements regarding the specific target group of IFAD and SIGHT and related reporting requirements. Specifically, FSPs accessing the Lending Facility for Rural Businesses should demonstrate commitment to working in rural areas, have presence in areas outside the Amman governorate and be committed to serving smallholders and other micro and small rural businesses, particularly women and youth; have a track record of running an MSME lending portfolio, good financial performance, including asset quality, capital adequacy, and profitability; and a strategic focus on MSME development.

IFAD will indicatively allocate USD 1 million for loans for small ruminants’ breed improvement for smallholders, in the amount of up to USD 7,500 per borrower; and USD 1.45 million for loans for micro businesses in the amounts of up to USD 5,000 per borrower; and USD 1.45 million for loans to small rural businesses in the amounts of USD 10,000 per borrower. As with the number of beneficiaries, these will be indicative types of loan products to steer FSPs towards IFAD’s target group. The facility is designed to encourage commercial banks and MFIs to view loans to the livestock sector and rural entrepreneurs as a viable business opportunity and use their own funds eventually to lend to this sector.

Training and technical assistance. No separate budget will be allocated for training and technical assistance for the subcomponent. Instead, FSPs are expected to benefit from training and TA under the current IFAD’s project – REGEP, where USD 200,000 is provided for this purpose. TA to PFIs includes a variety of activities, such as exposure visits to countries with developed agricultural lending programs, provision of technical assistance in the development of agricultural lending products and mechanisms aimed at mitigating risks related to such products, peer learning events and other relevant assistance.

Beneficiaries of Subcomponent 2.2 – recipients of loans for on-farm and off-farm rural micro and small businesses will be eligible for the participation in smallholder training activities under Component 1 of the SIGHT project (on topics covering sheep and goat production, animal nutrition and feeding, forage crop production, livestock health and husbandry, herbal and medicinal plants harvested from rangelands or cultivated, small-scale irrigation, and promoting water saving technologies). Those borrowers who are interested would also be eligible to participate in EBRD business advisory training provided under Subcomponent 2.1 covering specialized areas of expertise including strategy, marketing, organization, operations, technology, engineering solutions, quality management, financial management and energy efficiency and environment, as appropriate).

For the overall component implementation at the PMU level, the Livelihood and Gender Specialist will be hired to oversee the implementation of Subcomponent 2.1. The Monitoring and Evaluation (M&E) Specialist will be tasked to oversee the implementation of Subcomponent 2.2 in cooperation with CBJ. Specifically, the following tasks will be included in the M&E Specialist’s job description with respect to Subcomponent 2.2:

a) Setting-up and maintaining data-bases for the collection of key statistical and performance information on PFIs and end-borrowers from CBJ, in accordance with the project design and IFAD’s Rural Finance Manual;

b) Preparing periodic reports in accordance with project procedures on the basis of information received from CBJ;

c) Documenting beneficiaries’ success stories and lessons learnt (at least one per quarter);

d) Conducting relevant monitoring activities in coordination and cooperation with CBJ, both on PFIs and end borrowers;
5.3. Sustainability and Innovation

The following features of the Component will help ensure the sustainability of the proposed activities:

a) Activities under Subcomponent 2.1 will be based on an innovative, proven Graduation into Sustainable Livelihood Approach that has shown success rate of 75-98%. IFAD’s intervention will be complementary to the activities of Jordanian and international NGOs working with low-income people and refugees in Jordan – providing them with livelihood assistance and supporting informal income-generating activities. Subcomponent 2.1 will address respective steps of the Graduation Approach thus filling in any gaps in the graduation sequence. Larger grant packages provided under Subcomponent 2.1 as compared to those typically offered by NGOs are aimed at bringing the informal businesses at a new level and ensuring their greater sustainability.

b) Activities under Subcomponent 2.2 will be implemented by a professional wholesale facility of the Central Bank of Jordan, with a successful track record of managing lending facilities of international organizations. This will be the first dedicated agricultural and rural finance facility in Jordan.

c) Placing the lending facility with CBJ can potentially help leverage funding from other international and domestic sources.

d) Loans for on-lending to the Project target group will be extended by CBJ to strong and capable local financial institutions committed to serving IFAD’s target group; these financial institutions will be assessed and monitored by CBJ.

e) The terms and conditions of loans extended to smallholders and rural micro and small businesses, including interest rates, will be market-based, as CBJ will not interfere in financial institutions’ policies.

f) Activities of the two subcomponents will be supported by respective training to beneficiaries and technical assistance to financial institutions participating in the Lending Facility for Rural Businesses. Beneficiaries of both Subcomponent 2.1 and 2.2 will be eligible to access relevant training and technical assistance activities under Component 1.

g) Participating financial institutions will be develop new agricultural or rural finance products that would become part of their regular offering and thus help expand agricultural and rural lending activities in Jordan.

5.4. Risks and Mitigation

The main risks for the component are related to the profile of beneficiaries under Subcomponent 2.1 – Syrian refugees. According to the TransAtlantic Council on Migration, the implementation of the Graduation into Sustainable Livelihoods Approach should account for the specifics of the refugee populations, and implementers should work to overcome specific potential barriers to the success of the graduations programs for refugees, including: political and economic constraints (such as legal barriers for refugee employment or economic activity registration), refugee motivation and experience (including willingness to invest in livelihoods locally as opposed to aspirations to return to their home country), inadequate incorporation of host communities, and lack of experience and skills among implementing partners.

These risks will be addressed through:

a) Careful screening of beneficiaries to better assess their skills and motivations. As Syrian refugees reached with the proposed intervention will be residents of local communities rather than refugee camps, there is higher likelihood of their motivation and commitment to invest in sustainable livelihoods locally. Subcomponent 2.1 will also consider providing more transferrable assets (such as livestock) to refugees with agricultural skills, to create opportunities for their potential reintegration into their home country.

b) The design of Subcomponent 2.1 providing for the inclusion of both refugees and residents of host communities.

c) Careful selection of implementing NGOs and investing in their training in the implementation of the Graduation Approach, as necessary.

d) Cooperation with international and local NGOs working with refugees and low-income Jordanians to exchange information, cross-refer beneficiaries and ensure complementarity of assistance.

e) Cooperation with EBRD in the provision of business training to refugees.

5.5. Lessons Learnt from IFAD's Previous Projects in Jordan

In the past, IFAD has not worked with professional financial institutions in Jordan but rather with government providers of financial services – ACC and DEF characterized by poor financial performance, low transparency and weak loan assessment, targeting, and reporting systems (see Section 2.3). ACC was implementing rural finance components under the Yarmouk Agricultural Resources Development Project (YARDP, 2000-2008) and Agricultural Resource Management Project, Phase II (ARMP II, 2005-2015) with very limited success; DEF has been the implementing partner of the rural finance component under the Rural Economic Growth and Employment Project (REGEP, 2015-2021) but has not performed any activities.

**YARDP experience.** Under this project, the disbursement of agricultural loans by ACC was below expectations. The appraisal target was overestimated and after the 2006 Project Review, the amount allocated for the ACC line of agriculture credit was revised downward from the SDR 2.7 million to SDR 1.48.

Though loans designated for women in YARDP were in high demand and the allocation for this activity was increased from USD 140,000 to USD 1.8 million, the sustainability of the income-generating activities funded with these loans was very low: 39% of the 669 women who took a loan could not continue the implementation of the project because of marketing obstacles. ACC required collateral consisting of a fixed asset or a guarantee from a regular income earner in the household – to deduct the loan installments monthly from the salary rather than do a business analysis and rely on the business cash flows for repayment. In some instances, ACC required the provision of a written guarantee from the local court. This restricted the range of households eligible for financing from ACC and excluded people without a regular off-farm income or suitable collateral or guarantee. In addition, it can be argued that a model involving the husbands as the guarantors of loans taken by women may not represent a genuine instrument of women's empowerment.

Finally, ACC did not keep track of the socio-economic profile of its credit beneficiaries and ACC reports on the component implementation did not include basic performance indicators such as outstanding loans, repayment amounts etc.

**ARMP II experience.** Under this project, the disbursement of loans financed by IFAD through ACC stopped by November 2014. This was due to the fact that ACC has several lending programs some of

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214 [https://www.ifad.org/documents/10180/8782a81f-9a28-42b5-9d44-2bf5d0a3bcee](https://www.ifad.org/documents/10180/8782a81f-9a28-42b5-9d44-2bf5d0a3bcee)
which provide loans at lower (or even zero) interest rates and ACC has no targeting mechanism or clear eligibility criteria for participation in these programs.\textsuperscript{215}

\textbf{REGEP experience.} DEF as the implementing partner of the rural finance component of REGEP has not started any activities and has not implemented any of the recommendations of the IFAD supervision mission held in September-October 2016. Specifically, it was supposed to do both retail SME lending as well as establish a wholesale Rural Finance Fund available to MFIs that was expected to leverage investment from other sources. As noted earlier (Section 2.3), MFIs are not interested in borrowing from DEF and nor is DEF capable of lending to them, and there are unlikely any international funders interested in investing in DEF given its poor financial performance.

Ultimately, the rural finance activities under the previous projects implemented by the government financial service providers have not led to higher financial inclusion of project beneficiaries or to scaling up results.

For SIP, IFAD therefore would seek to involve professional financial service providers capable of reaching IFAD’s target clients and offering them products with suitable terms and conditions, doing proper credit assessment, monitoring loan performance and reporting on results. Jordanian banks and MFIs with their excellent financial performance and strong social focus, funded through the professional wholesale facility of CBJ, are well positioned to achieve the project targets. The SIP project offers an opportunity to demonstrate success of rural and agricultural lending in Jordan and leverage both international and domestic funding for these activities, as well as to help local FSPs establish a new viable business line.

\section*{5.6. Monitoring and Evaluation Indicators}

The progress in achieving the objectives of the Component will be monitored using the following performance indicators:

\begin{tabular}{|l|l|}
\hline
\textbf{Subcomponent 2.1} & Quarterly: \\
& \begin{itemize}
  \item Total number of beneficiaries identified and financed
  \item Total volume disbursed (in USD)
  \item Average size of livelihood package (in USD), by graduation stage
  \item Beneficiaries data: gender, age (youth/other), social status (refugee/non-refugee), region, type of income-generating activity, graduation stage, duration in the graduation program (in months)
\end{itemize}
\hline
& Number and types of events for beneficiaries: \\
& \begin{itemize}
  \item Training/TA events for beneficiaries of Subcomponent 2.1, number of participants, types of events, duration etc.
\end{itemize}
\hline
\textbf{Subcomponent 2.2} & Quarterly, disaggregated by PFI on the basis of gender, age (youth/other) lending methodology (individual/group – for MFIs), region, loan purpose (small ruminants breed improvement, agriculture (crops, livestock, other), other rural business): \\
& \begin{itemize}
  \item Total number of loans disbursed
  \item Total value disbursed (in USD)
  \item Total number of active borrowers
  \item Total value of outstanding gross loan portfolio (in USD)
  \item Average loan amount (in USD)
  \item Average loan term (in months)
\end{itemize}
\hline
& Quarterly: \\
& \begin{itemize}
  \item Portfolio at risk over 30 days (for the Project portfolio)
  \item Write-off rate (for the Project portfolio)
\end{itemize}
\hline
\textbf{At the Project Management Unit level} & Quarterly: \\
& \begin{itemize}
  \item Total number of PFIs
  \item Total number of new products developed
\end{itemize}
\end{tabular}

Number and types of events for beneficiaries:

\textsuperscript{215} \url{https://operations.ifad.org/documents/654016/6daafa63-f0c1-45d9-9221-7cd48ea65bef}

216
<p>| |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>• Number of beneficiaries of Subcomponent 2.2 accessing training/TA services under Component 1 or Subcomponent 2.1, types of events attended/TA received</td>
</tr>
</tbody>
</table>
Annex I: Syrian Refugees

There are now 1.26 million Syrian refugees in Jordan with around 657,000 registered with UNHCR. Northern and Eastern Jordan have the highest proportion of highly and severely vulnerable refugees. The largest numbers of Syrian refugees are located in the northern governorates of the country. Amman, Irbid and Mafraq governorates alone are hosting more than 76% of all the Syrian refugees in Jordan. Syrian refugees constitute 52% of the total population of Mafraq, already the poorest region in Jordan, with nearly half living in communities outside the refugee camps. Syrian refugees constitute 12% of the total population of Irbid, and 7% of the total population of the Amman governorate.

The average size of the household is 6. Severely vulnerable refugee families have more family members, more children and a higher dependency ratio. 81% of Syrians are under the age of 35, with 65% of all registered Syrian refugees in Jordan. Syrian refugees constitute 12% of the total population of Irbid, and 7% of the total population of the Amman governorate.

Nearly 79% of refugees are highly or severely vulnerable to food insecurity, and 72% are severely vulnerable due to the adoption of emergency coping strategies to meet food needs. Over 80% of Syrian refugees are using crisis or emergency coping strategies. Refugees have exhausted their savings and are depleting their food intake, sending family members (including children) out to beg or work (Syrian children earn JOD 2-5 per day) resorting to high-risk, illegal or socially degrading jobs.

Over 60% of Syrian non-camp families have a high or severely vulnerable level of debt per capita, influencing their ability to cope economically even if receiving income/assistance. 56% of families with “low” vulnerability have work permits and only 17% of severely vulnerable families have a work permit. Over 80% of Syrian refugees have primary education or below. 41% of Syrian individuals are part of families with severe health vulnerability and 15% are part of highly health vulnerable families. Over 92.5% of refugees are living in rented accommodations in urban areas. The majority of dwellings are considered “poor quality”. For the majority of families who have insecure livelihoods or income, maintaining rental commitments is a considerable burden. Over 75% of individuals are highly or severely shelter vulnerable and 50% are highly shelter vulnerable.

Around 120,000-160,000 Syrian refugees working are estimated to be working informally in the country. “Open” sectors: Syrians are allowed to work in with work permits include manufacturing, construction, agriculture, while ‘closed’ sectors include some sales, education, hairdressing, and most professional sectors such as engineering and medicine as well as any kind of selling in markets. Work permits issued so far number 34,467 of which only 2% (558) have gone to Syrian women. In the informal labour market, only 7% of Syrian women access work, compared to 51% of Syrian refugee men. Women reported the main obstacles to work being family-related (child care, family objection, household responsibilities) and structural (lack of opportunities, lack of access). Minors under age 18 form a group of informal Syrian workers who are not eligible for work permits, a population of approximately 11,098 workers.

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218 UNHCR - Health Access & Utilization Survey in Jordan 2016 - Syrians
219 Jordan: UNHCR Operational Update, January 2017
220 UNHCR (2015), VAF: Key Findings
221 UNHCR (2015), VAF: Key Findings,
Annex II: PFI Eligibility Requirements, Terms and Conditions for the Lending Facility for Rural Businesses

1. Participating financial institutions (PFI) in the IFAD Lending Facility for Rural Businesses can be Jordanian banks and MFIs. PFIs accessing funding from the Lending Facility for Rural Businesses must meet the following eligibility criteria:

- Commitment to working in rural areas: PFIs should have presence in areas outside the Amman governorate and be committed to serving smallholders and other micro and small rural businesses, particularly women and youth;
- Past experience: a demonstrated track record of running an MSME lending portfolio for at least three years or, in case of PFIs new to this business, presence of a head of MSME operations with at least three years of relevant experience;
- Overall financial performance: the PFI needs to have an acceptable rating on the CAMEL/ROCA based assessment undertaken by the CBJ. It is proposed that a minimum score of 3 is necessary;
- Loan collections quality: an acceptable level of net non-performing loans (90 days) of no more than 8 percent or else PFI has a clear action plan to improve collections;
- Capital adequacy: an acceptable level of capital adequacy (minimum 12%);
- Earnings: an acceptable level of earnings quality in the last financial year (minimum return on assets of 0.3%);
- MSME strategic focus: a business plan for the PFIs MSME operations for growth;
- Accounting: availability of audited accounts with no significant unresolved observations from audit reports.

2. Once deemed eligible, banks will be selected for lending under the Project based on an appraisal of their proposals submitted to CBJ. As a central bank, CBJ undertakes detailed on-site and off-site appraisals of commercial banks under its supervision, with the frequency being determined based on the risk profile of the bank. The method used is a CAMEL/ROCA based approach and this will be drawn upon in making an assessment of banks’ proposals under this Project.

3. Proposals will be assessed by the PIU in CBJ based on an assessment of: (i) the quality of financial performance; (ii) management strength of the bank, (iii) the banks’ strategy and plans for MSME portfolio growth in rural areas, and (iv) quality of proposal, including in terms of the “additionality” they entail in financing MSMEs – for example in introducing new products (such as agricultural loans), reaching particularly underserved regions or new MSMEs, innovative use of delivery channels including MFIs (for banks), mobile banking, etc. The following broad framework is proposed in the Table below.

4. It is proposed that proposals that score 3.5 and higher (1 – highest, 5 – lowest) will be considered for funding under the Project. Through such use of defining access to funds based on performance and proposed technical content and management capacity for implementation, the Project will have a strong signaling effect. Adherence to these criteria will be ascertained by CBJ as part of the PFI funding appraisal process.

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The Hashemite Kingdom of Jordan  
Small Ruminant Investments and Graduating Households in Transition (SIGHT)  
Final Report  
Working Paper 2: Access to Financial Services

<table>
<thead>
<tr>
<th>Overall</th>
<th>Parameters</th>
<th>ROCA</th>
<th>CAMEL</th>
<th>Score range (1 best, 5 lowest)</th>
<th>Weight</th>
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<td>Institutional</td>
<td>Strength of capital</td>
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<td>Asset quality</td>
<td>Operational controls</td>
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<td>15</td>
<td>18.75</td>
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<tr>
<td></td>
<td>Earnings quality</td>
<td>Compliance</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
</tr>
<tr>
<td></td>
<td>Management quality</td>
<td>Asset quality</td>
<td>1-5</td>
<td>15</td>
<td>18.75</td>
</tr>
<tr>
<td></td>
<td>Liquidity</td>
<td>-</td>
<td>1-5</td>
<td>15</td>
<td>-</td>
</tr>
</tbody>
</table>

| MSME capacity and proposal | Value addition of the proposal (product innovation, under-served areas, women, youth focused, etc.) | 1-5 | 10 |
| | Management capacity for MSME operations (staff quality, MSME department, performance of SME portfolio, business plan) | 1-5 | 10 |
| | Efficiency in lending (pricing, cost efficiency) | 1-5 | 5 |
| Overall | | | 100 |

6. The following terms and conditions will be reflected in the on-lending financial agreements to be entered into between CBJ and the PFIs:

- All on-lending financial agreements will be subject to prior review by IFAD.
- The PFI will enter into a lending agreement with CBJ.
- Sub-loans will be denominated in JOD, except under circumstances where foreign currency loans are demanded by MSMEs for exporting or re-exporting in accordance with CBJ regulations on foreign currency loans.
- Interest rates from CBJ to partner banks will be set in accordance with market principles.
- Maturity of sub-loan of up to 15 years, inclusive of a grace period of up to 5 years.
- The partner bank will keep the IFAD-funded MSME sub-loans separate and distinct from the rest of their loan portfolios.
- The PFI will seek to ensure that the Portfolio at Risk over 30 days under the line of credit does not exceed 5% (as of reporting date), and the loan write-off rate does not exceed 2% (per annum).
- Sub-loans to MSMEs will be made in JOD, except in circumstances where foreign currency loans are demanded and made in accordance with CBJ regulations on foreign currency lending.
- Sub-loans to MSMEs will be evaluated using a credit appraisal methodology acceptable to CBJ.
- Sub-loans to MSMEs will ensure acceptable procurement practices in case sub-loans were used for any procurement activities.
- The PFI will charge interest rates adequate to cover its cost of borrowing from CBJ plus a reasonable risk-adjusted spread and profit margin. The interest rate will be positive in real terms.
- The Project will not provide financing to PFIs or SMEs for sub-projects that result in direct economic and social impacts through the: (a) involuntary taking of land resulting in: (i) relocation or loss of shelter, (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.
The PFI will be responsible for ensuring that MSME sub-borrowers comply with applicable IFAD’s procurement rules and applicable Jordanian environmental legislation/regulations.

The PFI will be responsible for environmental due diligence to mitigate negative environmental impacts if any are present.

Remedies and penalties might be applied by CBJ in the event that a PFI fails to comply with requirements.

The PFI will retain all documentation relating to sub-loans, provide regular reports to CBJ in agreed formats.