



Investing in rural people

**Republic of Uzbekistan**

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# **Agriculture Diversification and Modernization Project**

## **Final Project Design Report**

Main report and appendices

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## Currency equivalents

Currency Unit	=	UZS
US\$1.0	=	UZS 8,092 (September 2017)

## Weights and measures

1 kilogram (kg)	=	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 acre	=	0.405 hectare
1 hectare	=	2.47 acres

## Abbreviations and acronyms

ADB	Asian Development Bank
ADMP	Agriculture Diversification and Modernization Project
AI	Artificial Insemination
AWPB	Annual Workplan and Budget
BAS	Business Advisory Services
BAIS	Basin Administration of Irrigation System
BWAU	Business Women's Association of Uzbekistan
CBU	Central Bank of Uzbekistan
CCI	Chamber of Commerce and Industry
CLARA	Cash-flow Linked Agri-Risk Assessment tool
CSO	Civil Society Organization
CU	Credit Union
DF	<i>Dekhan</i> farmer
DVCDP	Dairy Value Chains Development Project
EAEU	Eurasian Economic Union
ECA	Europe and Central Asia
EIU	Economist Intelligence Unit
EUR	Euro
FAO	Food and Agriculture Organisation of the United Nations
FAO-TCP	Food and Agriculture Organization Technical Cooperation Project
FM	Financial Management
FFS	Farmer Field Schools
FSP	Financial Service Provider
FY	Fiscal year
GLP	Gross Loan Portfolio
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
GNI	Gross National Income
GOU	Government of Uzbekistan
HoReCa	Hotels-Restaurants-Catering sector
Ha	Hectare
HSN	WTO Harmonized System Nomenclature
IC	Inter-agency Council
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IRR	Internal Rate of Return
KM	Knowledge Management
LE	Leading Entity
MAWR	Ministry of Agriculture and Water Resources
MCO	Microcredit organization
M&E	Monitoring and Evaluation
MIX	Microfinance Information eXchange

MOE	Ministry of Economy
MOF	Ministry of Finance
NBCO	Non-bank credit organization
NGO	Non-governmental organization
NPL	Non-performing loans
NPV	Net Present Value
OIE	World Organisation of Animal Health
PAR	Portfolio at risk
PF	Private farmer
PFI	Participating Financial Institution
PFM	Public Financial Management
PIM	Project Implementation Manual
PIT	Project Implementation Team
PM&E/L	Planning, Monitoring and Evaluation/Learning
PMU	Project Management Unit
PPL	Public Procurement Law
RGF	Rural Guarantee Facility
RIMS	Results Impact Management System
RRA	Rural Restructuring Agency
SCI	State Committee on Investments
SCEP	State Committee on Environmental Protection
SCLRGCC	State Committee on Land Resources, Geodesy, Cartography and Cadastre
SLA	Subsidiary Loan Agreement
SME	Small and medium-sized enterprise
SPS	World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures
SRI-LPF	Scientific-Research Institution for Livestock, Poultry and Fishery
SVC	State Veterinary Committee
TA	Technical Assistance
TNC	Third National Communication (TNC) of Uzbekistan under the UNFCCC
TOR	Terms of Reference
TOT	Training of Trainers
UN	United Nations
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
US\$	United States Dollar
UZS	Uzbek Sum (national currency)
VC	Value Chain
VCDP	Value Chain Development Plan
WB	World Bank
WCA	Water Consumer Association
WHO	World Health Organisation
WIS	Welfare Improvement Strategy

## Definitions

*Agribusinesses* are formally registered private enterprises engaged in agriculture-related businesses, including processing and trades. Agribusinesses include 'agri-firms,' which are non-government associations and private firms in the horticulture sector that participate in the distribution and processing of fruit and vegetables.

*Dekhan farmers* are operators of *dekhan* farms. *Dekhan* farms are legally registered, small farming enterprises governed by the Law on *Dekhan* Farms (1998). *Dekhan* farmers have access to the land through life-long leaseholds with inheritable possession rights. *Dekhan* plots are usually located near the operator's homestead. The maximum plot size of a *dekhan* farm for crops is 0.35 ha on irrigated land and 0.5 ha on rain-fed land. In addition, pasture land of up to 1 ha can be included.

*Hakimiat* refers to a local government/state administration. *Hakimiats* operate at region and district levels.

*Inclusive* means providing equitable opportunities to all participants, including the poor and the vulnerable.

*Mahalla* means a traditional forum of self-governance at the neighbourhood community level. Traditionally, it was governed by a council of elders. *Mahalla* in its current usage is understood as a social unit/community with mechanisms of self-governance.

*Product quality* refers to debris and sediment; off-flavors, color and odor; bacterial and somatic cells count; chemicals content (e.g., nitrates, antibiotics, detergents); composition and acidity.

*Product safety* refers to biological, chemical and physical hazards to public health (human food-borne disease).

*Rural youth* are residents of rural areas in the age group of 14-30 years old (inclusive).

*Small private farmers* are private farmers operating agricultural land no larger than 5 ha. Private farms operate on public lands under long-term leases (30-50 years) with inheritable rights, and are legally registered.

*Smallholder producer* or *small-scale farmer* in the Project context is defined as either a *dekhan* farmer or small private farmer (Appendix 2 of the ADMP Project Design Report).

*Value chain actors* comprise farmers (*dekhan* and private) and their groups, service providers (e.g. agronomists, vets, zoo-technicians), state regulatory agencies (e.g. standards, safety, extension), aggregators, agro-processing companies, food whole-sale and retail outlets.

*Value Chain Development Plan (VCDP)*, also called *Roadmaps* is a business model for development of efficient value chain including a chart that shows clear linkages with smallholder producers – their locations and an estimated number. The VCDP will also present the LE's plan to improve its and the suppliers' technical knowledge and capacities as well as required investments in order to maximise the functioning of the VC. It will also have optional sections on: (i) measures to address climate change mitigation and adaptation; and (ii) initiatives to promote youth employment and female leadership within the enterprise. A sample of VCDP is presented in Appendix 4 of the ADMP Project Design Report.

*Water Consumers' Association (WCA)* are non-governmental, non-profit organizations created by water consumers and act as legal entities to coordinate water relations, as well as provide representation and protection of common interests. WCAs are governed by the 'Water and water use' law, revision of which in December 2009 replaced Water User Associations (WUAs) with WCAs.

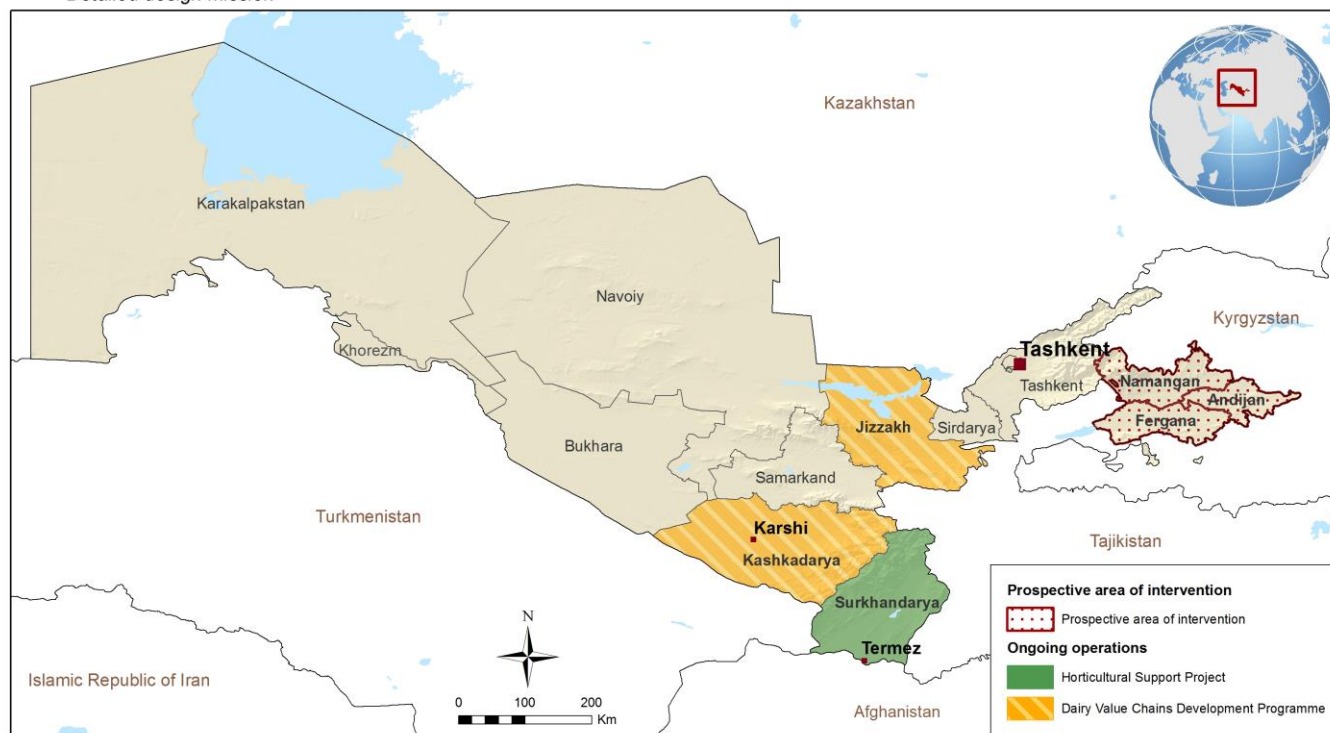


## Map of the Project area

### Republic of Uzbekistan

#### Agriculture Diversification and Modernization Project

Detailed design mission



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 13-07-2017

## Executive Summary

### Justification and rationale

Diversification, modernization and import substitution of agriculture production is currently a priority policy of the Government of Uzbekistan as stipulated in the Presidential Decree No.2460 on agriculture sector reforms and development for 2016-2020 as well as in the Welfare Improvement Strategy for 2013-2015 (WIS II). Diversification of products, particularly horticulture crops, livestock and related sub-sectors, is expected to enhance rural family incomes and reduce the number of low-income households. This can happen when smallholder producers are effectively integrated into value chains on a sustainable basis, and have developed capacity to produce for the market, especially high value crops. IFAD's experience with the value chain approach in the region and elsewhere suggests that for smallholder producers to participate in value chains for their benefit, roles of the private sector actors are crucial. Traders/buyers, aggregators, processors, exporters and other private players shape to a large extent how the value chains perform. From the viewpoint of smallholder producers (*dekhans* and small private farmers), conducive partnerships with them present a major opportunity for sustained income augmentation. The Project considers private sector operators willing to invest time and resources to increase value chain competitiveness in a way that also improves the benefits of smallholder producers as 'champions', and will support their efforts to strengthen their businesses. This in turn will result in making the value chains more inclusive to smallholder producers.

The development hypothesis on which the ADMP is based is that the agribusinesses of the selected value chain can be motivated and driven by their own commercial interests to anchor and lead the process of including smallholder producers in their supply chains resulting in job creation, income generation and poverty reduction of these beneficiaries. The ADMP will work in the selected value chains and provide holistic and coordinated support to all the actors within a value chain to improve the chains' overall performance. The Project will invite agribusinesses and other entities qualifying for the role of a Leading Entity (LE) and who are willing to develop sound business models under productive partnership with their suppliers. Smallholder producers, who are the Project's primary target group, will be captured in each selected value chain in order to enhance their inclusiveness and improve their returns from agriculture thanks to the direct contractual arrangements with LEs. ADMP's targeting strategy will therefore incorporate the principles of smallholders' inclusiveness. *Mahallas* will play an active role in identifying and mobilizing farmers at the community level in a transparent and participatory manner, and will ensure to avoid the elite capture of the Project opportunities and benefits.

ADMP is expected to further strengthen the support provided to the agriculture sector while targeting smallholder producers of Uzbekistan. The Project's structure in its three investment components (plus one for Project management) presents a synergic and internally consistent approach to contribute to its goal 'to improve incomes and livelihoods of rural people in the Project area and its development objective to increase inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved natural resources'.

### Project area and target groups

#### Programme area and target group

The Project will be implemented in Andijan, Fergana and Namangan regions (commonly called the Fergana Valley) which are among the most disadvantaged. ADMP's main target groups are: (i) rural low-income households of *dekhan* farms, who strive to increase income from agriculture through active participation in the Project supported value chains; (ii) small private farmers engaged/interested in horticulture and livestock (with farm size of up to 5 ha); (iii) agribusinesses with existing or potential linkages with (i) and (ii); and (iv) rural youth in the Project regions. Special attention will be paid to ensure the participation of female-headed households both in *dekhan* and private farmers (at least 30%), as well as to reach out female youth (50%). With respect to rural finance, the Project will focus

on those rural businesses that are in need of investment for their business development but face constraints such as lack of available funding or collateral requirements.

### **Number of Beneficiaries**

The Project is expected to reach out directly around 75,000 households, for an estimated total 375,000 individuals, and about 21,000 indirect beneficiaries (appx. 105,000 people). These include 11,000 HHs benefitting of loans and training, plus approximately 54,000 incremental suppliers of the LEs benefitting of ADMP loans (including about 30,000 smallholder or dekhani farmers involved in horticulture or livestock production), and some 10,000 full time equivalent incremental jobs created by the LEs' incremental economic activities. The Project will have a wide approach to outreach, trying to involve all segments of the value chains. The bulk of outreach is represented by: (a) the 1,200 LEs supported under Component 1, which will also benefit of the incremental PFIs' loans financed by the ADMP under Component 2; (b) 5,000 suppliers benefitting of capacity development provided by the LEs under Component 1 (which may also benefit of incremental credits); (c) 2,475 entrepreneurs/small-scale farmers benefitting of credits generated through the rural guarantee facility; (d) about 1,000 farmers benefitting of the modernization of the tertiary irrigation scheme under Component 3; and (e) about 2,250 producers attending Farmers Field Schools.

### **Project goal, objectives, outcomes and approach**

#### **Development objective**

The Goal of the ADMP is to improve the incomes and livelihoods of rural people in the Project area. The Project's Development Objective is to increase inclusiveness and profitability of selected value chains through enhanced productivity, market access and improved natural resources. The project implementation will be guided by the Project's Results Framework. Key performance indicators at Goal level are: (i) at least 80 per cent of Project beneficiaries report at least 20% increase in income; and (ii) at least 75,000 households receiving services promoted or supported by the project. Key performance indicators at the Development Objective level are: (i) at least 10,000 full-time jobs (and equivalent) created; and (ii) at least 70 per cent of supported smallholder producers including dekhans report a 20 per cent increase in sales along the value chains.

#### **Components and Outcomes**

The Project will have three principal inter-related components as well as another one to support Project management and implementation. The four components are: (i) Inclusive Value Chains Development; (ii) Inclusive Rural Finance; (iii) Climate-Resilient Rural Infrastructure; and (iv) Project Management.

#### **Component 1: Inclusive Value Chains Development**

The outcome of this component is 'enhanced capacity for sustainable and efficient performance of targeted stakeholders and aimed to create an enabling business environment for agribusinesses in selected value chains (VC) with strong backward linkages with smallholder producers; and to strengthen the capacities of the farmers and other stakeholders of those VCs. Three activities will be implemented under the enabling business environment for agribusinesses. These include (i) Value Chain Mapping exercises based on Rapid Market Assessment results; (ii) Rapid Market Assessments of additional sub-sectors; and (iii) Preparation of VC development plans ('roadmaps') for Leading Entities (LEs). The activities the capacity building support include: (i) Private enterprises considered as LEs; (ii) *Mahallas* for their facilitation of community mobilization and identification of value chain participating households; (iii) *Dekhan* farms and small private farmers in the target Regions; (iv) State veterinary services; (v) MAWR; (vi) Research institutions and industry associations; (vii) MAWR's Regional Plant Quarantine Laboratory (Uzglavgoskarantin) for Fergana Valley; and (viii) MAWR's Certification and Standardisation Centre. The expected results include: (i) 70 per cent of supported smallholder/*dekhani* producers engaged in partnerships/commercial agreements with LEs; and (ii) 80 per cent of smallholder producers reporting adoption of new/improved technologies or practices.

## **Component 2: Inclusive Rural Finance**

The outcome of this Component is 'increased productivity and efficiency along targeted smallholder-inclusive value chains', to enable value chain actors to increase their investment in profitable value chains through the provision of credit and a guarantee facility. The Project will support (i) the State Fund for the Support of the Development of Entrepreneurial Activity to render credit guarantees to smallholders and other rural enterprises who lack acceptable collateral by offering the partial coverage of lending risks as these guarantees will encourage banks to lend to the agricultural sector (ii) work with all banks interested in lending to agriculture in the target regions and meeting the Project's eligibility criteria to facilitate farmers and agricultural businesses' access to finance and (iii) to establish special credit window for youth who are underserved by financial services with affordable and flexible lending products. Banks will be free to set their own interest rates allowing serving the Project beneficiaries in a sustainable manner; however the banks will be selected through a competitive process to ensure that those offering the best conditions are chosen for the Project implementation. The outcome will be measured by the following indicator: PFIs' portfolio at risk below 5 per cent.

## **Component 3: Climate-resilient Rural Infrastructure**

This Component aims at removing bottlenecks for reliable irrigation water supply, which inhibit increasing participation for *dekhans* and small private farmers (hereunder farmers) in enhanced commercialization of agriculture for selected value chains. This will be achieved through modernization of inter-farm irrigation network operated by Water Consumer Associations (WCAs) and will provide conditions for targeted farmers' group to: (i) diversify agricultural production from low income to high value crops; (ii) increase productivity of cultivated lands; (iii) address challenges of drought and reduced water availability predicted due to climate change; and (iv) increase capacity of WCAs and Basin Administration of Irrigation System (BAIS) regional and district divisions in efficient water resource management and irrigation system operation and maintenance. Thus, the outcome of this Component is 'improved farmland productivity resulting from modernized irrigation infrastructure' measured by the following indicator: at least 1,000 farmers reporting improved supply of irrigation water and increase in production as a result of the adoption of modern irrigation techniques.

## **Programme coordination, monitoring and evaluation**

The ADMP will promote close coordination, especially with those projects also under the Rural Restructuring Agency (RRA), based on smooth information flow and open dialogue in order to ensure sound synergies and avoid duplication of efforts. The operations of the PMU will be founded upon the Results Framework (logframe) - which will facilitate: effective execution of Project activities; the monitoring of progress made; and the systematization of Project implementation experiences - the principal PMU activities comprise: (i) overall operations planning, M&E and financial administration, including budgeting, procurement, accounting and disbursement. This includes: (i) the preparation of the AWPBs, and the corresponding operational plans for each line of action; (ii) Project management as pertaining to loan administration and the actual field investments and activities; (iii) plan for socioeconomic and baseline studies (RIMS system), exercise gender and legal advisory functions, and set up the systems and operational structures for Project learning and KM; (iv) submission of proposed VCDPs to the Selection Panel; (v) follow-up and supervise Project operations at field level, paying attention to the requirements of components and activities and the proper follow-up of pilot initiatives, including TA to primary production/processing and to PFIs; (vi) implementation support to the: associated implementing partners; organized farmer groups of beneficiaries; PFIs; and other entities active in the participating VCs and ultimately to the Project's primary target groups of *dekhans*, small private farmers, related agribusiness entrepreneurs and market services providers; and (vii) provision of the required reports to government entities and IFAD according to the Project Financing Agreement, i.e., RIMS surveys, mid-term and final evaluations, etc.

## **Implementation arrangements**

The Ministry of Agriculture and Water Resources (MAWR) will have the overall responsibility for management of the Project on behalf of the Government of Uzbekistan. Day-to-day oversight of the ADMP's management will rest with a PMU embedded in the RRA, a State entity within the MAWR.

The overall management oversight of the Project will rest with an Inter-agency Council (IC). The IC is an inter-governmental institutions agency for Cooperation with International Financial Institutions, Foreign Government Agencies and Donor Countries in Implementation of Large-scale and Strategically Important Investment Projects, and it shall provide guidance and direction to the Project Implementing agency. The ADMP Project Manager would act as Secretary to the IC. The IC would meet as required to: (i) review and approve the Project Implementation Manual (PIM) and Annual Workplan and Budgets (AWPB) including related procurement plans; (ii) review implementation progress and other monitoring and evaluation reports; and (iii) be advised of the results of the joint IFAD-MAWR Project supervision missions, and advise and initiate action on matters arising relative to ensuring the efficient and effective implementation of the Project in line with the provisions, terms and conditions of the Project Financing Agreement.

The PMU for the ADMP will be headed by a Project Manager and be composed (preliminarily) of: a Chief Accountant; Procurement Officer; Gender/Youth Officer; Administrative Assistant/Translator; and a Driver. The ADMP will use HSP/DVCDP legal staff. In addition, the Project will count on the services of national and international specialists in various fields.

A Project Implementation Team (PIT) will be established in one of the regions of the Project area from PY1 (TBD by the Government, but more likely in Namangan). The PIT would comprise a: Regional Coordinator (Value Chain and Business Specialist), Rural Finance Officer, Engineer and M&E Specialist. Regional Coordinators will be recruited to coordinate Project activities in the other remaining oblasts. The PIT will be responsible for day-to-day implementation in the field of all aspects of the Project, with the exception of financial administration and procurement, which will be managed entirely by the relevant personnel of the RRA/ADMP PMU at central level.

The PMU/PIT will coordinate the work of competitively selected private service providers, consultants and participating financial institutions (PFIs) that will interact with VC actors on planning and financial matters. VCDPs will be prepared by those private service providers/consultants working with VC LEs and other VC stakeholders. The Project design team assessed a number of potential private service providers/consultants and confirmed that sufficient capacity exists in the private sector for VCDP and business plan preparation.

## **Expected Results and Benefits**

### **Benefits, sustainability and exit strategy**

The ADMP is expected to generate substantial net incremental benefits households' farmers, *dekhan* farmers, commercial farmers, agri-firms and rural entrepreneurs. Benefits would accrue from: (i) increased farm and herd productivity and reduction of production costs due to the adoption of modern technologies; (ii) reduced losses during harvesting; (iii) a subsequent increased proportion of marketed farm produce; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs and in increased sales and net margins; (v) increased farm income through diversification from wheat and cotton production; (vi) increased employment opportunities, either for hired or family labour, for both on-farm and off-farm activities; (vii) increased trade (export) and improved balance of payments; and (viii) increased revenues for the government as a result of increased volume of taxable production. Principal increases in incomes would be largely dependent on farmers/household/rural entrepreneurs accessing dedicated credit lines from PFIs, benefiting of capacity development interventions from the Project (including demonstrations) as well as from participating LEs, adopting efficient techniques and technologies (including in irrigation) promoted by the Project. This will generally contribute to create a

favourable economic environment in Fergana Valley, encouraging farmers/rural entrepreneurs to produce more competitive products and establish stronger commercial linkages

**Economic Rate of Return.** On the basis of the above assumptions, the economic analysis of the overall Project indicates that the gains of the total investments, under the ADMP, are significant and robust in economic terms. The analysis results in an internal economic rate of return of 16.5 per cent and a NPV of US\$ 33.7 million taken over 20 years with the benefit stream based on the quantifiable benefits that relate directly to the activities undertaken by the Project.

## **Cost and financing**

### **Programme costs and financing**

The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 157.0 million (UZS 1,255 billion). The Project will be financed, over two cycles, through multiple sources, including IFAD loan, IFAD grant, Government, Beneficiaries and Participating Financial Institutions (PFI). 30% of the project costs will be financed from IFAD loan (current PBAS - 2016-2018): for an amount of US\$ 46.2 million and an IFAD grant of US\$0.3 million. The financing gap of US\$ 47 million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval or by cofinancing identified during implementation. The Government will waive all taxes related to project expenditures for an amount of US\$ 24.5 million, including all those associated to goods and services procured under the loans generated by the project's funded credit lines, and social fund associated to personnel. The Participating Financial Institutions (PFIs) are expected to contribute about US\$ 19.5 million to match the funds made available by the project and Beneficiaries would contribute by at least US\$ 19.5 million, corresponding to their 20 per cent contribution to the credit lines.

## **Sustainability, knowledge management and scaling-up**

### **Sustainability and Exit strategy**

The sustainability of the Project's results is, inter alia, based on: (i) the VC champion business and technical capacity building activities to be promoted; (ii) the demand-driven nature of the intervention; and (iii) the preparation of VCDPs as the basis for all investment which should lead to inclusive and more equitable and profitable VCs. The Project's sustainability is also based on: an exit strategy that comprises: (i) ensuring the ownership by users-beneficiaries of the financed activities; (ii) the participatory development of demand-driven technology; (iii) integration along VCs including input suppliers and service providers; and (iv) limited project operational, staff, and recurrent costs.

For the public goods under sub-component 1.2, the skills and investments in the Plant Quarantine, Certification labs and Vet clinics would make the public services more robust, advancing toward meeting international standards and recognized equivalence with trading partners. After the Project ends, the Government will need to maintain sufficient funding for continued investments and running costs. Some of these expenditures could be covered through user-fees from producers (vaccinations) and processors (export certification) as well as handing over goods procured under demonstrations to host farmers possibly on a partially reimbursed approach.

## Results Framework

Results hierarchy		Indicators				Means of Verification			Assumptions
Hierarchy	Indicator	C.I.	Baseline	Mid-term	End Target	Source	Frequency	Responsibility	
<b>Goal</b>									
Improved incomes and livelihoods of rural people in the Project area	Percentage of project beneficiaries reporting at least 20% increase in income <sup>1</sup>	Impact <sup>2</sup>	0%	30%	80% (30% women)	Baseline, mid-term and impact surveys Specialized (qualitative / quantitative) thematic studies Household income surveys	Baseline, Mid-term, Completion Annually	PMU M&E unit	Overall political and economic situation remains stable Stability of prices in agricultural commodities
	Number of HHs receiving services promoted or supported by the project	Outreach	0	15,000	75,000 <sup>3</sup> (30% women)				
<b>Project development objective</b>									
Increased inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved	Number of full-time job (or equivalent) created <sup>4</sup>	2.2.1	0	2,000	10,000 (30% women)	Baseline, mid-term and impact surveys Annual outcome surveys Project baseline study and mid-term review and implementation	Baseline, Mid-term, Completion	PMU M&E unit	Macro-economic conditions remains stable

<sup>1</sup> This indicator is inspired by the RIMS Impact-level indicator “Number of people experiencing economic mobility”, corresponding to SDG target 1.1 and 1.2, but taking into account the specific aspect of income, where ADMP is expected to generate an impact. These project’s direct beneficiaries are estimated around 75,000 households. These include stakeholders benefitting of credit lines supported by the ADMP, as well as of trainings/other supports provided by the project and by the project’s supported LEs, or from FFS curricula and guided exposure to technological demonstration plots.

<sup>2</sup> RIMS impact level indicator, corresponding to SDG target 1.1 and 1.2.

<sup>3</sup> Including about 30,000 smallholder or dekhkan farmers involved in horticulture or livestock production.

<sup>4</sup> The target corresponding to some 80% of the number of full-time equivalent jobs created through ADMP interventions (see Appendix 10, Economic and Financial Analysis).

Results hierarchy		Indicators				Means of Verification			Assumptions
Hierarchy	Indicator	C.I.	Baseline	Mid-term	End Target	Source	Frequency	Responsibility	
natural resources	Percentage of supported smallholder producers including <i>dekhans</i> reporting 20% increase in sales along the value chains	2.2.5	0	30%	70% (30% women)	completion report Uzagroexport, <sup>5</sup> plus reports from participating agri-firms (processor/aggregator) on access to foreign markets			
<b>Outcomes/outputs</b>									
<b>Component 1. Inclusive Value Chains Development</b>									
<b>Outcome 1</b>									
Enhanced capacity for sustainable and efficient performance of targeted stakeholder	Percentage of supported smallholder/ <i>dekhan</i> farmers engaged in partnerships/commercial agreements <sup>6</sup> with LEs		0%	30%	70% (30% women)	Annual surveys Project's M&E records and report	Annually	PMU M&E unit	Government policies and rural economic reforms supporting smallholders, private sector development and the agriculture sector are implemented
	Percentage of smallholder producers reporting adoption of new / improved technologies or practices <sup>7</sup>	1.2.2	0%	30%	80% (30% women)	Government's national, regional and local production data Targeted field studies and surveys			
<b>Output 1.1</b>									
Enabled business environment for inclusive value chains	Number of LEs supported in the preparation of a Value Chain Development Plan		0	800	1,200 (30% women)	Project records	Continuously	PMU M&E unit	

<sup>5</sup> Uzagroexport is a state enterprise that monitors the export. There is a branch in each region of Fergana Valley.

<sup>6</sup> Including, but not limited to, formal contracts with traders / aggregators / processors. LEs will specify those linkages in their Strategic Plans / Roadmaps, developed by LEs within sub-comp. 1.1.

<sup>7</sup> The outreach is mostly determined by sub-component 1.2's interventions. Beneficiaries include 1,200 LE representatives (also benefitting of support under sub-component 1.1 for their roadmap; about 5,000 LE suppliers, benefitting from inclusive workshops/ trainings; about 600 Mahalla leaders (community mobilization and TOT); about 1,000 additional Mahalla members; 3,200 producers benefitting of demo plots (10 farmers at least for each demo plot established); 2,250 FFS members. Adoption rate is about 80%.



Results hierarchy	Indicator	Indicators				Means of Verification	Frequency	Responsibility	Assumptions
		C.I.	Baseline	Mid-term	End Target				
<b>Output 1.2</b>									
Strengthened value chains stakeholders	Number of value chain stakeholders receiving training on better agronomic, livestock and business practices <sup>8</sup>		0	6,500	10,000 (30% women)	Project records	Continuously	PMU M&E unit	
<b>Component 2. Inclusive Rural Finance</b>									
<b>Outcome 2</b>									
Productivity and efficiency along targeted smallholder-inclusive value chains increased	Participating Financial Institutions' Portfolio at risk > 30 days	1.2.6	<5%	<5%	<5%	Project baseline study and mid-term review and implementation completion report;	Annually	PMU M&E unit	Micro-economic conditions are supportive for doing business
						Participating Financial Institutions and Central Bank			
						Project M&E records and report			
<b>Output 2.1</b>									
Operational Rural Guarantee Facility	Value of loans guaranteed by the Rural Guarantee Facility <sup>9</sup>		0	15.0 m US\$	49.5 m US\$	Project records	Continuously	PMU M&E unit	
<b>Output 2.2</b>									
Increased access to credits by rural residents	Number of value chain stakeholders (Leading Entities) in the project areas accessing financial services <sup>10</sup>	1.1.5	0	500	1,200 (30% women)	Project records	Continuously	PMU M&E unit	

<sup>8</sup> Adapted from the RIMS CI 1.1.4: "Number of persons trained in production practices and/or technologies".

<sup>9</sup> The Rural Guarantee Facility (US\$ 9.9m) would allow mobilizing a five-fold amount of loans. With an average loan size of US\$ 20,000 (assumed also for other credit lines within ADMP's scope, this implies some 2,475 loans.

<sup>10</sup> ADMP's funded credit lines (US\$ 54.8m) would generate some 1,200 loans with average size of US\$ 45,000. The target is expected to be achieved faster than the Rural Guarantee Facility as the credit lines are expected to be immediately operational.

Results hierarchy	Indicator	Indicators				Means of Verification	Frequency	Responsibility	Assumptions
		C.I.	Baseline	Mid-term	End Target				
<b>Output 2.3</b>									
Increased access to credits by youth	Number of youth involved in the selected value chains accessing to the financial services <sup>11</sup>		0	250	1,000 (50% women)	Project records	Continuously	PMU M&E unit	
<b>Component 3. Climate-resilient Rural Infrastructure</b>									
<b>Outcome 3</b>									
Improved farmland productivity resulting from modernized irrigation infrastructure	Number of HHs reporting increase in production as a result of the adoption of modern irrigation techniques <sup>12</sup>	1.2.4	0	200	1,000 (30% women)	Annual outcome surveys	Annually	PMU M&E unit	Government policies and rural economic reforms supporting smallholders, private sector development and the agriculture sector are implemented
						Project's M&E records and report			
						Government's national, regional and local production data			
						Targeted field studies and surveys			
<b>Output 3.1</b>									
Enhanced access by smallholder farmers to modernized irrigation systems	Number of hectares of farmland under water-related infrastructure constructed/rehabilitated	1.1.2	0	2,000	3,500	Project records	Continuously	PMU M&E unit	
<b>Output 3.2</b>									
Strengthened WCAs	Number of WCA representatives trained		0	20	30	Project records	Continuously	PMU M&E unit	

[1] All indicators will be disaggregated by sex, poverty, farm type and youth categories; [2] Baseline will be conducted during the first year of the project and the Results Framework will be complemented with baseline values accordingly.

<sup>11</sup> Under the assumption that youth would borrow an average of US\$ 10,000, the Youth Fund (US\$ 10.0m) would be able to generate some 1,000 loans, one fourth by mid-term.

<sup>12</sup> The modernization of the tertiary irrigation would benefit some 3,500 ha in the three regions, with 3.5 ha average land size / farm it implies some 1,000 households.

## I. Strategic context and rationale

### A. Country and rural development context

1. Uzbekistan is a land-locked country of 447,400 km<sup>2</sup> in Central Asia bordering Kazakhstan, Tajikistan, Kyrgyzstan, Afghanistan and Turkmenistan, with a population of 31.8 million (2016) of which around 60 per cent is rural. Between 2008 and 2012, the country's GDP grew at an average rate of 8.4 per cent per annum. With a GDP per capita of US\$ 2,130 (in 2015)<sup>13</sup>, Uzbekistan is considered a lower middle-income country. Data suggests that the economic growth took a broad-based and inclusive path.
2. GDP is expected to grow over the next two years to average 7.2 per cent<sup>14</sup>, slightly lower for the agriculture sector (6.5 per cent), but still significant. The EIU projects overall growth to continue at 5.3 per cent in 2019-21, bolstered by a pick-up in global commodity prices in 2020-21 and rising gas export volumes<sup>15</sup>. According to the World Bank's Doing Business 2017 report, Uzbekistan ranks 87th out of the 189 economies surveyed, with an index value of 63.03 (compared to 71.05 of the Europe and Central Asia region).
3. **Agriculture.** Agriculture provides around 25 per cent of the country's employment, and its share of the Gross Domestic Product (GDP) is estimated at 17.6 per cent (2014)<sup>16</sup>, reflecting proportional changes that result from government efforts to expand the industrial and services sectors. Food imports meet the country's growing demand and the increased disposable income/purchasing capacity of the population, which is increasingly applied to higher value goods, particularly meat and dairy products. In 2015, Uzbekistan's agricultural imports were 11.5 per cent (US\$ 1.3 billion) of the country's total imports (EIU).
4. Around 40 per cent of Uzbekistan's rural population is directly engaged in agriculture-related activities. Cotton and grains are the main crops in Uzbekistan, while horticultural products, fruits, vegetables and livestock production are important sources of income for rural families. According to government statistics, the country produced US\$ 12.9 billion in agricultural products in 2013, of which US\$ 7.7 billion was crop production, and US\$ 5.2 billion was livestock and poultry production (USDA). Common characteristics for both the horticultural and livestock sub-sectors are that the main actors and producers are small-scale semi-commercial private farms and the smallholder *dekhan*, family homesteads. The current land tenure and allocation structure is the result of the implementation of land distribution and privatization initiatives following the restructuring of large collective and state farms.
5. The Government aimed for annual growth of the agrarian sector of 5.4 per cent in the period of 2013-2015, and for this growth emphasis to be continued. The specific aim is diversifying from wheat and cotton production towards higher value intensive crops on a total of 220,000 ha in the next five years (Presidential Decree No. 2460 of 29/12/2015). *Dekhan* farmers are prominently included in plans for intensification of production systems. It is also planned to increase the prominence of Uzbek industries involved in processing horticultural, meat and dairy products. There are opportunities both in export and domestic markets. Targeted investment to support production would be needed in: i) improvement of irrigation water use efficiency; ii) rehabilitation of land degraded through salinity and soil erosion; iii) appropriate mechanisation to improve productivity; iv) application of modern conservation agriculture techniques; and v) investment in the knowledge and capacity of farmers and farm employees to better apply improved techniques and business principles.

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<sup>13</sup> State Statistics Committee of the Government of Uzbekistan, 2016

<sup>14</sup> WB – Country Partnership Framework 2016-2020

<sup>15</sup> EIU – Country Report, April 2017

<sup>16</sup> State Statistics Committee of the Government of Uzbekistan, 2015

## Rural development and social context

6. **Rural poverty.** Poverty declined from 27.5 per cent in 2001 to 14 per cent in 2015. Major contributing factors included rapid economic growth, creation of new small businesses and employment, public investments in education, health and infrastructure, increases in public sector salaries, and increased remittances<sup>17</sup>. According to the data of Uzbekistan Household Budget Survey (HBS), households with a greater number of dependents (three or more children) have a higher risk of being in poverty. Education level of the household head is another important factor: poverty rates are higher among the households whose heads do not have specialized or vocational education<sup>18</sup>.

7. In 2015, poverty in rural areas accounted for 17 per cent compared to 11 per cent among the urban population<sup>19</sup>. The low productivity of agriculture; rural populations being subject to numerous implicit taxes; high dependency within households (i.e. the small number of working adults relative to total household members); regional divergences (i.e. richer regions growing faster); and the high level of informality of rural labour markets are associated with this poverty. Lack of access to productive assets, infrastructure, energy, land and water, technical and financial services, are other causes of limited productivity and poverty, disproportionately affecting rural women and young people. Other vulnerable groups in terms of income poverty include families with many children, people with disabilities, the unemployed, and people with lower levels of education.

8. **Food security.** There has been a significant improvement of the diet and nutrition since independence. Productivity improvements in the agricultural sector have resulted in increased consumption of meat (130 per cent increase since 2006), milk and dairy products (160 per cent), vegetables (more than 200 per cent) and fruits (almost 400 per cent)<sup>20</sup>. Levels of Uzbekistan's production of vegetables, potatoes and fruits are more than adequate on a per capita basis: 300kg of vegetables, 75 kg of potatoes and 44 kg of grapes. However, production of meat and dairy products did not meet the adequate level of per capita consumption, as recommended by the Ministry of Health. According to an UNDP report, average person's diet in Uzbekistan is skewed towards grains although the situation is reported to be improving<sup>21</sup>. The report calls for measures to stimulate the consolidation of the livestock sector, improve productivity and expand the fodder production base.

9. **Gender.** Uzbekistan has an adequate policy on gender equality, however indicators of human development suggest that progress toward gender equality has been slow. The value of Uzbekistan's Gender Development Index is 0.946, indicating gender-based disparities in human development.

10. Women play an important role in agriculture as they make up the majority of land users and workers of *dekhan* farms. However, rural women in particular are disadvantaged mainly because of a relatively low (44 per cent) share of formal employment with a high concentration in low-paid sectors such as health and education; relative dependence on the informal economy and agricultural piecework; limited access to credit and property; the relatively low level of social services provision in rural areas; and increasing cultural conservatism manifested in strengthening trends towards early marriage and child-bearing, decreasing engagement with higher education and limited mobility, notwithstanding that women internal migrants are reportedly increasing.

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<sup>17</sup> ADB (2016), Report and Recommendation of the President to the Board of Directors on Horticulture Value Chain Development Project, Supplementary Document 15: Detailed Sector Assessment - Agriculture, Natural Resources and Rural Development

<sup>18</sup> ADB (2012)

<sup>19</sup> Center for Economic Research (2015), Millennium Development Goals Report: UZBEKISTAN 2015

<sup>20</sup> ADB (2016)

<sup>21</sup> 'Food Security in Uzbekistan', cited in ADB (2016).

**11. Agricultural household income.** There is limited information available on the structure of household income. A 2007 survey of 800 *dekhan* and private farm households respectively showed that, for *dekhan* farm households, only one quarter of household income came from agriculture product sales and self-consumption, with 40 per cent of income derived from off-farm employment and enterprise activities. By contrast, private farmers earned over 60 per cent of household income from produce sales and consumption. This smallholder (*dekhan*) income distribution is not unusual in Central Asian economies and calls into question the importance *dekhan* households may place on agriculture production as an area of investment and income

Income Source	Proportion of the cumulative household income (%)	
	<i>Dekhan</i> farmers	Private farmers
Income earned from sales of agricultural products harvested on <i>dekhan</i> plot	13.8	15.0
Consumption of agricultural products from <i>dekhan</i> plot	11.3	8.6
Income earned from sales of agricultural produce harvested on farm plot	-	39.6
Consumption of agricultural products from farm plot	-	8.4
Incomes from employment in agricultural sector	7.8	1.1
Incomes from employment in non-agricultural sector	30.4	8.0
Incomes from non-agricultural entrepreneurial activity	9.6	3.9
Incomes from labour migration	7.2	0.9
Retirement and disability pensions	10.4	5.5
Allowances to disadvantaged families and disadvantaged families with children	2.8	0.9
Other incomes	6.7	8.1

generation. Europe and Central Asia (ECA) region evidence suggests that a significant number of *dekhan* farmers may not wish to risk investment in incremental agriculture production, however, substantial income gains can also be derived from improved agricultural husbandry and farm business management, with low cost/risk implications.

**12. Access to finance.** Access to formal financial services in Uzbekistan is very low: only about 1 per cent of people obtain credit from a financial institution. The financial sector of Uzbekistan is dominated by the banking sector holding about 95 per cent of total financial sector assets. Providers of lending services as of April 2017 include banks, microcredit organizations and pawnshops. Informal, local forms of rotating savings and credit associations are widely practiced among low-income households across the country. Similarly, there are various financial arrangements occurring between and among agro-processors, wholesalers, and primary producers (i.e. as debtors or creditors) and involving transactions that are carried out either in cash, money transfers, or “in kind.” No collateral is required from the producer other than pledging the sale of crops financed exclusively to the processor/wholesaler. In February 2017, the President of Uzbekistan established a Guarantee Fund for the development of small entrepreneurship. Established in the form of a joint stock company, the Guarantee Fund had not yet started working as of May 2017. Various stakeholder ministries and agencies have been tasked to develop policies and procedures for the Guarantee Fund. Non-bank credit organizations (NBCO) exist in Uzbekistan; however it will be difficult for the ADMP to reach the Project beneficiaries through micro-credit organizations (MCO). It also appears that the Government has been focusing on the development of microcredit and loans to small and medium-sized enterprise (SMEs) primarily through banks.

**13. Agricultural research and development (R&D)/extension.** One critical limitation to rural and agricultural development in Uzbekistan is the lack of modern skills in farm production and the inadequate and narrow experience of the present farming population with farm planning and decision-making. Agricultural research institutions and agricultural extension services are poorly equipped to fill the knowledge gap of farmers, mainly owing to their organisational set-up and limited government resources. Uzbekistan spent less than 0.5 per cent of the national budget to cover their R&D requirements, which is the equivalent of a 0.13 R&D/GDP ratio. There is no national policy framework on extension services. Uzbek farmers/livestock producers and experts do not communicate; and extension services are limited, e.g. limited to livestock vaccination in the dairy sector. Furthermore,

farmers, in general, face saline, polluted and impoverished soils, advancing soil degradation and the loss of topsoil due to wind erosion. They also engage in livestock production-based livelihoods without access to suitable breeds, production inputs and know-how, in addition to reductions in forage crop yields, altogether resulting in low productivity.

14. **Environment and climate change.** The main environmental challenges in Uzbekistan are: freshwater resource depletion and deterioration of water quality and quantity; desertification, salinization and erosion; and climate change. Because the majority of the rural population depends on agriculture for their livelihood, the risks of climate change for the agricultural sector are significant, and the rural poor will be disproportionately affected due to their relatively fewer assets/lower ability to adapt, and the higher share of income they spend on food. Climate-related impacts could therefore undermine the progress that has been made in the country's poverty reduction, and adversely impact food security in vulnerable rural areas. Adaptation measures to climate-related threats include: improved water use efficiency and enhanced irrigation/ drainage infrastructure to improve production and decrease water wastage; optimized agronomic inputs, livestock management and health/ nutrition practices at *dekhan* farm level; improved pasture management and livestock breeds; and increased private sector involvement aiming at overall increased investments, enhanced productivity and resource management strategies.

15. **Irrigation and water management.** The irrigation and drainage network in Uzbekistan is extensive, but investments in infrastructure maintenance have decreased in recent years. Few incentives exist for the application of water-saving technologies, which are particularly important in light of projected water unavailability due to climate change. Water costs are covered by an overall land tax and are not tied to use of inputs. Currently, irrigation is characterized by low-efficiency systems: the deteriorated irrigation and drainage infrastructure coupled with inadequate water management and water use inefficiency, cause environmental degradation and declines in agricultural productivity. Most Government efforts focus on rehabilitation measures of the critically deteriorated sections and structures on network rather than development and modernization, such as shifting from dominantly surface/furrow irrigation to water efficient technologies (e.g. drip or sprinkler), that besides efficient use of available water resources, will substantially increase productivity of lands. Almost all main, inter-farm and on-farm canal networks remain open; are mostly earthen or lined/flume canals with high water losses and are inefficient in water distribution. Water saving is also critical to address challenges of the climate changes. To mitigate challenges of anticipated climate change and to reduce vulnerability of cultivated agriculture of the country, the Government of Uzbekistan has undertaken specific measures to support investments in water saving technologies. These measures however benefit big farmers who have relevant resources, placing *dekhan* and smallholder farmers at a competitive disadvantage.

16. **The livestock sector.** The increase in livestock sector output<sup>22</sup> from 2003-2013, specifically 71 per cent for milk, 54 per cent for beef, 101 per cent for lamb and goat meat, appears to be largely due to the steady rise in the number of cattle and sheep/goats which increased by 63 per cent and 60 per cent respectively during this period. The Government sees national self-sufficiency as a means of improving the population's access to livestock products and uses export restrictions to achieve this. While the immediate market opportunities are for import substitution rather than export, such policies are counter-productive as they create uncertainty and discourage long-term investment in processing. Some 70,000 head of improved cattle (mostly dairy breed heifers, few bulls) have been imported from European countries since 2008<sup>23</sup> and this popular programme is continuing. Artificial insemination (AI) is widely used in the country for household, *dekhan* and private farm cattle alike. On average, *dekhan* farms have about 3 cattle and 8 sheep or goats while private farms hold an average of 55 cattle and 15 sheep and goats. However, in 2015, the share of cattle in *dekhan* farms was 94.1 per cent and only 4.9 per cent in large private farms, but productivity in *dekhan* farms is low, especially from local breed dairy cows. This along with weak cooling and distribution infrastructure mean that *dekhan* farms

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<sup>22</sup> Average of 2003-2005 versus 2011-2012

<sup>23</sup> Interview with the Chairman of the Livestock Reproduction Association, Tashkent.

are not well integrated into dairy supply chains. Insufficient fodder is also recognized as being a major constraint in Uzbekistan, due to restrictions on land use which require private farms to allocate a fixed amount of land to wheat and cotton production, leaving insufficient land for fodder crop production, for zero grazing (cut and fed fresh in stalls), hay or silage production. There is potential to increase the productivity of pastures in arid areas but there are inter-related environmental and social constraints to doing so.

17. **Standards.** 80 per cent of all horticultural exports from Uzbekistan go to the Russian Federation (RF), whereas Uzbekistan products only account for 3-4 per cent of all fruit and vegetable imports into the RF. A growing share of horticultural goods in the RF reaches consumers via supermarkets. This poses a risk to Uzbek exporters since supermarkets have higher food safety and packaging requirements than the traditional wholesale markets that currently handle most of Uzbekistan's exports. RF food product standards are likely to change as well, to reflect WTO norms. As and when, therefore, Uzbek horticulture, dairy or beef processors who wish to access the high-value RF market will need to comply with international Sanitary and Phytosanitary Agreement standards. Moreover, the issue even more pressing when trading with members of the recently established Eurasian Economic Union (EAEU). Uzbekistan also needs to meet the norms of the union. This would require harmonization of many agricultural and food standards (out of 266 country-level standards in agriculture and food).

### **Government strategy and priorities**

18. The overall framework for development in Uzbekistan is guided by the Government's Welfare Improvement Strategy 2013-2015 (WIS-II), whose vision is for the country to become an industrialized, high middle-income country by 2050. Critical elements for such a transformation include: (i) increasing the economy's efficiency and competitiveness and reduced dependency on a few commodity exports; (ii) strengthening the financial sector to support private entrepreneurial activity; (iii) diversifying production towards higher value-added activities with demonstrated comparative advantage; (iv) creating jobs for the rapidly growing population of young educated people; and (v) improving governance, including access to information on government policies and their outcomes. The strategy, *inter alia*, explicitly seeks to increase the efficiency of the agricultural sector; reduce the levels of poverty, nation-wide, and among rural populations; and expand cooperation with international development institutions.

19. The Government's key priorities for diversification and modernization of the agriculture sector is also expressed in the December 2015 Presidential Decree No.2460 on agriculture sector reforms and development for 2016-2020, which stresses the need to gradually shift from cotton and wheat to more value-added commodities as well as on the introduction of resource-saving technologies.

### **IFAD Country Programme**

20. IFAD's investment operation in Uzbekistan started in 2013 with the Horticultural Support Project (HSP). The total cost of HSP is US\$ 31.7 million, of which IFAD financing amounts to US\$ 10.6 million (a loan in the amount of US\$ 9.6 million, and a grant of US\$ 1.0). A Spanish financed loan accounts for US\$ 11.4 million. The HSP targets the Surkhandarya region and aims to increase the incomes and assets of smallholder farmers, processors and service providers in the horticultural sub-sector. To achieve this, the Project promotes the use of modern, efficient farming techniques. The HSP also works to improve access to domestic and international markets, and to stimulate investments in productive assets for horticulture. As at early 2017 the project had reached 1,503 households and delivered training on crop production and technologies to 1,322 people. It also provided loans for a total value of around US\$8 million to 312 *dekhan* and private farmers for establishing and improving orchards and vegetable fields; introducing modern production technologies; and investing in agricultural machinery, cold storage and processing facilities. The second investment project, Dairy Value Chains Development Project (DVCDP), became effective in 2017. Of the total cost of US\$ 39.4 million, IFAD financing is US\$ 24.6 million, which comprises a US\$ 23.9 million loan and a US\$ 0.7 million grant. The 6-year project aims to improve the livelihoods of rural women and men – primarily in

the regions of Jizzakh and Kashkadarya – who operate as milk producers, and processing and market entrepreneurs. It also seeks to create decent employment opportunities along the dairy value chain. The development objectives of the Project include increasing productivity, competitiveness, commercial farmer linkages and market access of smallholder dairy farms.

## **B. Rationale (Theory of change)**

21. IFAD's entry point and comparative advantage in Uzbekistan derive from its experience in rural development and poverty reduction which has been acquired in neighbouring and other countries that face similar constraints. IFAD's experience in the following areas are particularly relevant in the country context: (i) public and private partnerships in support of smallholders; (ii) development of inclusive value chains with strategic combination of investment and technical assistance; (iii) targeting women and youth; (iv) results-based project M&E; and (v) knowledge management. Moreover, IFAD has been the first IFI introducing the inclusive value chain approach in rural Uzbekistan through its funded HSP and the DVCDP. Due to this and in view of the IFAD's mandate, the Government of Uzbekistan considers the institution as a specialized rural development agency that has the skill to develop and apply innovative approaches to the economic and technical needs of rural populations, thus increasing the pace of rural transformation that is currently underway.

22. At the same time, it is apparent that the regions of the Fergana Valley have densely populated rural areas and a relative lack of finance for rural development. Namangan registers the second lowest country GDP per capita. In Uzbekistan, IFAD has already demonstrated the benefits of a value chain approach in horticulture, and will provide similar support for the dairy sector. However, there are remaining challenges, including the need to broaden opportunities for smallholder producers, the limited access to financial means for commercial development and the low productivity of significant land areas due to application of poor technologies for agricultural production. Additionally, climate change is a real threat, and adaptation options through supporting climate-resilient infrastructure will address this, but also contribute to the improvement of other environmental issues and increased productivity. Therefore, there is a continuing need for IFAD to provide stimulus and investment to identify and test the means for technically and economically viable solutions for rural development, especially in areas with significant income disadvantages.

23. Diversification, modernization and import substitution of agriculture production is currently a priority policy of the Government as stipulated in the Presidential Decree No.2460 on agriculture sector reforms and development for 2016-2020 as well as in the Welfare Improvement Strategy for 2013-2015 (WIS II). Diversification of products, particularly horticulture crops, livestock and related sub-sectors, is expected to enhance rural family incomes and reduce the number of low-income households. This can happen when smallholder producers are effectively integrated into value chains on a sustainable basis, and have developed capacity to produce for the market, especially high value crops. IFAD's experience with the value chain approach in the region and elsewhere suggests that for smallholder producers to participate in value chains for their benefit, roles of the private sector actors are crucial. Traders/buyers, aggregators, processors, exporters and other private players shape to a large extent how the value chains perform. From the viewpoint of smallholder producers (*dekhans* and small private farmers), conducive partnerships with them present a major opportunity for sustained income augmentation. The Project considers private sector operators willing to invest time and resources to increase value chain competitiveness in a way that also improves the benefits of smallholder producers as 'champions', and will support their efforts to strengthen their businesses. This in turn will result in making the value chains more inclusive to smallholder producers.

24. The development hypothesis on which the ADMP is based is that the agribusinesses of the selected value chain can be motivated and driven by their own commercial interests to anchor and lead the process of including smallholder producers in their supply chains resulting in job creation, income generation and poverty reduction of these beneficiaries. The ADMP will work in the selected value chains and provide holistic and coordinated support to all the actors within a value chain to improve the chains' overall performance. The Project will invite agribusinesses and other entities



qualifying for the role of a Leading Entity (LE) and who are willing to develop sound business models under productive partnership with their suppliers. Smallholder producers, who are the Project's primary target group, will be captured in each selected value chain in order to enhance their inclusiveness and improve their returns from agriculture thanks to the direct contractual arrangements with LEs. ADMP's targeting strategy will therefore incorporate the principles of smallholders' inclusiveness. *Mahallas* will play an active role in identifying and mobilizing farmers at the community level in a transparent and participatory manner, and will ensure to avoid the elite capture of the Project opportunities and benefits.

25. Based on the foundation created by the HSP and DVCDP, the proposed ADMP is expected to further strengthen the support provided to the agriculture sector while targeting smallholder producers of Uzbekistan. The Project's structure in its three investment components (plus one for Project management) presents a synergic and internally consistent approach to contribute to its goal 'to improve incomes and livelihoods of rural people in the Project area and its development objective to increase inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved natural resources'. The Project is expected to reach out directly around 75,000 households, for an estimated total 375,000 individuals, and about 21,000 indirect beneficiaries (appx. 105,000 people). These include 11,000 HHs benefitting of loans and training, plus approximately 54,000 incremental suppliers of the LEs benefitting of ADMP loans (of which about 30,000 are smallholder or dekhan farmers involved in horticulture or livestock production), and some 10,000 full time equivalent incremental jobs created by the LEs' incremental economic activities. The Project will have a wide approach to outreach, trying to involve all segments of the value chains. The bulk of outreach is represented by: (a) the 1,200 LEs supported under Component 1, which will also benefit of the incremental PFIs' loans financed by the ADMP under Component 2; (b) 5,000 suppliers benefitting of capacity development provided by the LEs under Component 1 (which may also benefit of incremental credits); (c) 2,475 entrepreneurs/ small-scale farmers benefitting of credits generated through the rural guarantee facility; (d) about 1,000 farmers benefitting of the modernization of the tertiary irrigation scheme under Component 3; and (e) about 2,250 producers attending Farmers Field Schools.

26. In order to reach its development objective, the Project will adopt a three-pronged approach. On one side, it will contribute enhancing the capacities of targeted stakeholder (farmers, LEs, associations, public institutions, etc.) in order to strengthen their performance and their interactions. Main benefits will include an increase and strengthening of the commercial agreements<sup>24</sup> between supported smallholder producers and LEs, as well as a generalized adoption of new / improved technologies or practices.<sup>25</sup> This group of interventions will represent some 5 per cent of the Project's investment, and will be instrumental to the achievement of the results under the two other investment components. On another side (85 per cent of the Project's investment), the Project will aim to enhance productivity and efficiency along targeted smallholder-inclusive value chains through increased stakeholders' access to financial services, with particular attention to smallholders and youth. Through the establishment of a Rural Guarantee Facility<sup>26</sup>, provision of credit lines and targeted capacity building of Participating Financial Institutions (PFIs), the Project will increase the volume of loans guaranteed and will enhance access to credit for value chain stakeholders in the Project areas (at least 1,200 LEs)<sup>27</sup> and the youth involved in the selected value chains.<sup>28</sup> Finally,

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<sup>24</sup> Including, but not limited to, formal contracts with traders/ aggregators/ processors. LEs will specify those linkages in their VC DPs, developed by LEs within Sub-component 1.1.

<sup>25</sup> The outreach is mostly determined by Sub-component 1.2's interventions. Beneficiaries include 1,200 LE representatives (also benefitting of support under Sub-component 1.1 for their VCDPs); about 5,000 LE suppliers, benefitting from inclusive workshops/ trainings; about 600 *Mahalla* leaders (community mobilization and TOT); about 1,000 additional *Mahalla* members; 3,200 producers benefitting of demo plots (10 farmers at least for each demo plot established); 2,250 FFS members. Adoption rate is about 80%.

<sup>26</sup> The Rural Guarantee Facility (US\$ 9.9 million) would allow mobilizing a five-fold amount of loans. With an average loan size of US\$ 20,000, this implies some 2,475 loans).

<sup>27</sup> ADMP's funded credit lines (US\$ 54.8 million) would generate some 1,200 loans with average size of US\$ 45,000. The target is expected to be achieved faster than the Rural Guarantee Facility as the credit lines are expected to be immediately operational.

through the promotion of climate resilient infrastructures, including modernized irrigation technologies (about 8 per cent of the investment), the Project will contribute to enhance the irrigation efficiency in above 3,500 ha. The above description reflects and is in line with the main Project elements, including: (a) Project's results framework and the targets of the corresponding indicators, (b) the cost tables and allocation of budget between components and sub-components; and (c) the economic and financial analysis, which illustrates the consolidated benefits generated by the Project's three investment components and corresponding seven sub-components.

## II. Project description

### A. Project area and target group

27. The Project will be implemented in Andijan, Fergana and Namangan regions (commonly called the Fergana Valley) which are among the most disadvantaged. ADMP's main target groups are: (i) rural low-income households of *dekhan* farms, who strive to increase income from agriculture through active participation in the Project supported value chains; (ii) small private farmers engaged/interested in horticulture and livestock (with farm size of up to 5 ha); (iii) agribusinesses with existing or potential linkages with (i) and (ii); and (iv) rural youth in the Project regions. Special attention will be paid to ensure the participation of female-headed households both in *dekhan* and private farmers (at least 30%), as well as to reach out female youth (50%). With respect to rural finance, the Project will focus on those rural businesses that are in need of investment for their business development but face constraints such as lack of available funding Projects or collateral requirements.

### B. Development objective and impact indicators

#### Project development goal/ objective

28. The **Goal** of the ADMP is *to improve the incomes and livelihoods of rural people in the Project area*. The Project's **Development Objective** is *to increase inclusiveness and profitability of selected value chains through enhanced productivity, market access and improved natural resources*.

#### Impact indicators

29. Project implementation will be guided by the Project's Results Framework. Key performance indicators at **Goal** level are: (i) at least 80 per cent of Project beneficiaries report at least 20% increase in income<sup>29</sup>; and (ii) at least 75,000 households receiving services promoted or supported by the project. Key performance indicators at the **Development Objective** level are: (i) at least 10,000 full-time jobs (and equivalent) created<sup>30</sup>; and (ii) at least 70 per cent of supported smallholder producers including *dekhans* report a 20 per cent increase in sales along the value chains.

### C. Components/Outcomes

30. The Project will have three principal inter-related components as well as another one to support Project management and implementation. The four components are: (i) Inclusive Value Chains Development; (ii) Inclusive Rural Finance; (iii) Climate-Resilient Rural Infrastructure; and (iv) Project Management.

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<sup>28</sup> Under the assumption that youth would borrow an average of US\$ 10,000, the Youth Fund (US\$ 10.0 million) would be able to generate some 1,000 loans, one fourth by mid-term.

<sup>29</sup> This indicator is inspired by the RIMS Impact-level indicator "Number of people experiencing economic mobility", corresponding to SDG target 1.1 and 1.2, but taking into account the specific aspect of income, where the ADMP is expected to generate an impact. These project's direct beneficiaries are estimated around 75,000 households. These include stakeholders benefitting of credit lines supported by the ADMP, as well as of trainings/other supports provided by the project and by the project's supported LEs, or from FFS curricula and guided exposure to technological demonstration plots.

<sup>30</sup> The target corresponding to some 80% of the number of full-time equivalent jobs created through ADMP interventions (see Appendix 10, Economic and Financial Analysis).

## Component 1: Inclusive Value Chains Development

31. This Component, the outcome of which is ‘enhanced capacity for sustainable and efficient performance of targeted stakeholders’, has two aims: to create an enabling business environment for agribusinesses in selected value chains (VC) with strong backward linkages with smallholder producers; and to strengthen the capacities of the farmers and other stakeholders of those VCs. The following indicators will measure the outcome: (i) 70 per cent of supported smallholder/*dekhan* producers engaged in partnerships/commercial agreements with LEs; and (ii) 80 per cent of smallholder producers reporting adoption of new/improved technologies or practices. Accordingly, this Component comprises the following two Sub-components:

32. **Sub-component 1.1: Enabling Business Environment for Inclusive Value Chains.** This Sub-component aims at identifying the VCs which will benefit both smallholder producers and private sector operators, and providing support their strategic planning process that provide the basis for the stakeholders’ access to Project opportunities. Specific capacity development will include the following key activities: (i) Value Chain Mapping exercises based on Rapid Market Assessment results; (ii) Rapid Market Assessments of additional sub-sectors; and (iii) Preparation of VC development plans (‘roadmaps’) for Leading Entities (LEs).

33. **Value Chain Mapping.** The Project Management Unit (PMU) will engage Regional Coordinators with support from international and national consultants to conduct exercises to map out the VCs of the selected sub-sectors and key actors on the basis of Rapid Market Assessments. The first set of exercises will target four sub-sectors (apiculture, sericulture, fisheries and small ruminants), following from Rapid Market Assessments, which were undertaken during the design of the ADMP. The Regional Coordinators will collect additional information from *hakimiats*, industry associations and other stakeholders for modification and validation. On the basis of the results, the PMU will prepare a list of enterprises willing to undertake the role of LEs, organize information dissemination meetings at regional level for the enterprises, and request them to formally file Expression of Interests with the evidence that they are legally registered. Similar mapping exercises will be conducted for other sub-sectors, including fruits, vegetables, and livestock once their Rapid Market Assessments are completed (see below).

34. **Rapid Market Assessments for Additional Sub-Sectors.** It is believed that some other sub-sectors are equally well positioned to nurture inclusive VCs in view of suitability for smallholders’ entry and productivity increases, and potential for high value addition. Such sub-sectors would include fruits, vegetables, poultry and other livestock products (for example rabbit). The Project will support Rapid Market Assessments for additional products at the onset, which will be followed by the same value chain mapping exercises as mentioned above. At least four such assessments are envisaged to be undertaken at the beginning of Project implementation.

35. **Preparation of Roadmaps for Value Chain development.** The Project will assist those private enterprises that expressed their interest to become Project partners as LEs with the formulation of a value chain development plan (VCDP). The VCDPs, also called Roadmaps, will outline a business model and include a chart that shows clear linkages with smallholder suppliers – their locations and an estimated number. The VCDP will also present the LE’s plan to improve its and the suppliers’ technical knowledge and capacities in order to maximise the functioning of the VC. It will also have optional sections on: (i) measures to address climate change mitigation and adaptation; and (ii) initiatives to promote youth employment and female leadership within the enterprise. The VCDP will be the basis for the LEs’ application for technical assistance support (under Sub-component 1.2).

36. **Sub-component 1.2: Capacity Development for Value Chain Stakeholders.** The Sub-component will provide demand-driven capacity building support to: (i) Private enterprises considered as LEs; (ii) *Mahallas* for their facilitation of community mobilization and identification of value chain participating households; (iii) *Dekhan* farms and small private farmers in the target Regions; (iv) State veterinary services; (v) MAWR; (vi) Research institutions and industry associations; (vii) MAWR’s

Regional Plant Quarantine Laboratory (Uzglavgoskarantin) for Fergana Valley; and (viii) MAWR's Certification and Standardisation Centre.

37. **Support to agribusinesses.** LEs (limited liability companies, registered farms and agri-firms) will be the backbone for actually forming VCs, i.e. getting commodities from growers, to processors, distributors and markets; they will be the recipients of Participatory Financial Institution (PFI) loans (Component 2). Delivery of capacity building and advisory services for LE commodity suppliers could be through: LE-designed and supervised farmer training/extension methods, through contracts with local subject matter specialist (agronomists, fishery experts, veterinarians, etc.); through commodity-specific extension material; via Farmer Field Schools (FFS) or a combination of these methods.

38. The Project will also provide technical assistance (TA) to selected LEs to receive specialised advisory services for technologies which have social and/or environmental benefits or are innovative, such as energy-efficient processing units, community-level storage or energy-saving technologies, or water-saving technologies, etc. The other possible topics include technology modernization, quality management systems, international food industry standards (ISO 22000 series, HACCP), preparation of company's testing laboratories for certification (ISO 17025), market prospecting for niche products.

39. **Support to mahallas (communities).** *Mahallas* have a comparative advantage as a socially respected mechanism for identifying low-income farmers, women-headed households, unemployed youth and any other community subgroup of interest. Therefore *mahallas* will be consulted and supported in selecting the target groups within their jurisdiction. The Project will support *mahallas* efforts to raise awareness on the Project among members, interact and coordinate with LEs, *hakimiat* and other Project stakeholders, and monitor implementation progress through organization of public meetings. The Project will also solicit *hakimiat's* support in provision of additional land for the smallholder producers when and as required for implementation of the VCDPs.

40. **Support to farmers.** Project support for farmers in the region will be through demonstrations and FFS. Up to 320 farming demonstration days/tours will be carried out with at least 20 local farmers participating in each. These tours will visit demonstration farms or agri-processors where newer crops, livestock or fisheries are successfully grown or processed, and best sustainable agricultural practices are being implemented, with the objective to extend modern farming and processing practices. Up to 90 FFS will be set up or strengthened as and where there is demand by the LEs or no other alternatives are acceptable in the specific location. In each region the PMU will organize with local LEs and district Government officials the demonstration days and FFS. The FFS will be set up as and when Project entrepreneurs and the PMU deem that no other readily available source of technical expertise is available. Alternative sources of expertise could include: local institutions/subject matter specialists, other certified Master Trainers or Master Farmers, agri-firms, or successful farmers using their demonstration plots.

41. **Support to veterinary services.** Uzbekistan is favoured with a wide distribution of Zoo-Veterinary Stations that cover all livestock raising areas where mostly Government employed vets, but also private vets, deliver both types of tasks. The ADMP primarily aims to build staff capacity in the field Zoo-Veterinary Stations but secondarily, and equally important, ensure that the field service vets coordinate with and funnel information and specimens into the public sector regulatory veterinary structure. The Project will provide training with a focus on production medicine and will help introduce new techniques and equipment.

42. In addition, three Demonstration Zoo-Veterinary Stations will be refurbished and equipped in order to extend the clinical, prevention and production services on offer. Six mobile veterinary clinics (double-cab pickup truck fitted with a 'veterinary box'; or multi-passenger van with handy storage for vet supplies) will be procured and equipped to provide services to households and *dekhans*. Mobile clinics will also transport vets and zoo-technicians for refresher training in production medicine. Additional refresher training short-course modules will be provided through contracting local Master Farmers or Veterinary Subject Matter Specialists for practical training in health and production of

small-scale poultry raising, fish/aquaculture, rabbit raising or other animal health and production themes.

43. **Animal Identification.** The State Veterinary Committee (SVC) is tasked with permanently identifying livestock in the country as an international standard under the OIE Terrestrial Code. The Project will support the government's animal identification system on a pilot basis, and it will be limited to some selected dairy value chains in one of the Project districts. The Project will provide support in development of a database software, technical assistance for field staff, ear tags, supervising research activities and database maintenance contracts, thereby allowing the Government to identify possible options for further development of the animal identification system in the country.

44. **Support to research institutions and industry associations.** The Project will enter a contract with BWA for its delivery of the services in support of female entrepreneurs and unemployed/underemployed youth in the Project area. The Project will facilitate youth's access to credit by providing a national consultant within the Chamber of Commerce and Industry.

45. The Project will extend TA to the Scientific-Research Institution for Livestock, Poultry and Fishery (SRI-LPF) to help Uzbek researchers carry out practical studies. The results of these practical research studies and TA will help inform extension messages as well as indicate expected returns (production and financial) from application of improved technologies by *dekhan* and small private farmers. When production and financial results of the studies are obtained, the information will be disseminated as extension material via meetings, brochures, farmer training and training of trainers (TOT) for bank and other agriculture financial institutions and agri-firms. Data and information can also be disseminated as technical papers to processors, academic institutions, scientific meetings and other users.

46. When industry or commodity associations identify value chain development constraints and request assistance to remove these constraints, the Project will meet these requests through provision of TA and equipment/supplies on the basis of a needs assessment. Similar support will be provided to Uzriba, which is the association of fisheries enterprises. Details of Project support will be elaborated on the basis of a rapid needs assessment. Areas of potential support include: strengthening of technical advisory capacities, preparation of extension materials/knowledge products, and establishment of communication and support networks among the members.

47. **Regional Plant Quarantine Laboratory (Uzglavgoskarantin) for the Fergana Valley.** Introducing new plant varieties (seeds, root stocks, vegetative matter) may offer opportunities for new value chains which entrepreneurs will want to capitalize on. In order for these new value chains to develop, the Plant Quarantine Inspection can facilitate safe importation of this material with a new Regional Plant Quarantine Laboratory in the Fergana Valley. A new laboratory (up to 250 m<sup>2</sup>), a field vehicle and laboratory equipment/furnishings will be provided. International TA from a plant laboratory specialist/agronomist will help ensure full functioning of the laboratory and will be recruited periodically over the first three years of the Project.

48. **Support to the MAWR.** The Project will make a provision for preparation of a project proposal aiming at establishment of a Management Information System (MIS) in the MAWR at central and regional levels. The MIS will aim to streamline management processes within the Ministry and to be linked to E-Government, MOF MIS, E-Trade, customs, and other relevant electronic systems.

49. **Support for quality and safety standards compliance.** For new crop or livestock commodities to be safe for domestic consumption or acceptable to importing countries, they must meet acceptable quality and safety standard, including the public safety standards required by the Codex Alimentarius and the SPS Agreement. The Project will support the work of the MAWR's Centre for Certification and Standardisation on harmonization of regulations and standards related to agricultural products, which will improve the current standards review process. The Project will also provide initial equipment, supplies and training to the Centre for assuring quality and safety of agriculture products promoted under the Project.

50. **Knowledge Management and Exchange.** As part of the Project's overall knowledge management efforts, this Sub-component will support agribusiness-related study tours and participation in international events, such as trade fairs, by selected Project stakeholders, particularly policy makers in the regional *hakimiats* for experiencing firsthand how some of these newer farming technologies, veterinary service delivery concepts and market analysis techniques are carried out. Publication of strategic documents and innovative technologies (mainly videos) for wider implications, such as reports on good practice.

### **Component 2: Inclusive Rural Finance**

51. The outcome of this Component is 'increased productivity and efficiency along targeted smallholder-inclusive value chains', to enable value chain actors to increase their investment in profitable value chains through the provision of credit and a guarantee facility. The outcome will be measured by the following indicator: PFIs' portfolio at risk below 5 per cent<sup>31</sup>

52. **Sub-component 2.1: Rural Guarantee Facility (RGF).** The Project will support the State Fund for the Support of the Development of Entrepreneurial Activity (State Fund) – newly created in August 2017 on the basis of the Guarantee Fund for the Development of Small Entrepreneurship (Guarantee Fund) (established in February 2017 and acting now as a shareholder of the State Fund). Credit guarantees will facilitate access to finance to smallholders and other rural enterprises who lack acceptable collateral by offering the partial coverage of lending risks as these guarantees will encourage banks to lend to the agricultural sector.

53. The key modalities of the RGF will include: a) it will offer portfolio guarantees to selected PFIs for up to 50% of the principal amount of loans issued without collateral for a maximum of US\$ 30,000 (or equivalent); b) PFIs will be required to leverage between 5 and maximum 10 times, the amount of their portfolio guarantee in rural loans, from their own resources (not including IFI credit lines); c) a cap of 7% on accumulated losses per PFI will be imposed, to maintain the guaranteed portfolio in check; d) loan appraisal and due diligence will be the responsibility of the issuing PFI, who bears 50% of each loan's risk and 93% of the portfolios' risk, thus avoiding problems of moral hazard, and e) PFI loans will be initially targeted only to target beneficiaries, but gradually will open to non-project applicants in the target area (Fergana Valley),

54. It is expected that an amount of US\$ 9.9 million allocated for this purpose would therefore help leverage up to US\$ 49.5 million in loans to the agricultural sector. The value chain stakeholders participating in the Project's Components 1 and 3 (who do not receive loans under Component 2) will be given priority in provision of guarantees.

55. **Technical assistance to the Guarantee Fund.** Before launching the facility, together with the International Finance Corporation (IFC), the Project will develop guidelines for the provision of agricultural guarantees to build the capacity of the Guarantee Fund to work with agricultural businesses.

56. The rural guarantee facility will be an example of an innovative approach helping to address one of the most pressing needs in the agricultural sector in Uzbekistan – the lack of collateral for obtaining loans for investment in agriculture (more details to be provided after the Final Project Design Mission).

57. **Sub-component 2.2: Credit lines for agriculture diversification and modernization.** The Project will work with all banks interested in lending to agriculture in the target regions and meeting the Project's eligibility criteria, as well as demonstrating commitment to incorporating local and international best practices in agricultural lending. In particular, banks will undergo an international due diligence process and will be required to adopt a specialized automated agricultural loan analysis and management system allowing for both loan analysis and agricultural portfolio management and monitoring, as well as business development advice to borrowers. Towards this, the Project will

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<sup>31</sup> RIMS 1<sup>st</sup> level core indicator

provide up to 70 per cent of funding to 7-10 banks interested in accessing the credit line from the Project, to integrate this system into banks' operational processes (about US\$ 0.33 million).

58. The adoption of the automated system will allow for the dissemination of business development advice by banks to agricultural borrowers as it contains "technical charts" for various agricultural sub-sectors – checklists outlining key processes and stages in agricultural cycles with specific guidance on their implementation, including best sustainable agricultural practices. Thus Project's co-funding of the system will not only strengthen the capacity of PFIs to lend to agriculture in a sustainable way, but will also contribute to improving agricultural business management practices by borrowers in an innovative and cost-efficient manner – by using banks as agents delivering business development advice.

59. Credit lines will be provided to farmers and agricultural businesses in local currency (except for agricultural businesses engaged in export activities with revenues in hard currency. Loans will be extended in the amounts ranging from US\$ 10,000 to US\$ 500,000 and their local currency equivalents (the categories not covered by subsidized government programmes or programmes of international financial institutions) for all agricultural sub-sectors except cotton and wheat, including both investment and working capital, to about 1,200 beneficiaries, with the average loan amount of US\$ 45,000. **The PFIs will be required to meet the average loan amount target as calculated on the basis of amounts disbursed each calendar year.** At least 30 per cent of the borrowers under Sub-component 2 will be women.

60. **Sub-component 2.3: Special credit window for youth.** PFIs will target youth (both men and women) who are underserved by financial services with affordable and flexible lending products. A prior research will be conducted to determine specific needs of this segment as well as current barriers to serving it. The conditions of this window will be defined based on the results of the research. Preliminarily, loans will be extended in the amounts ranging from US\$ 5,000 to US\$ 50,000 (the categories not covered by subsidized government programmes targeting youth or programmes of international financial institutions) for all agricultural sub-sectors except cotton and wheat, including both investment and working capital, to about 400 beneficiaries, with the average loan amount of US\$ 10,000. **The PFIs will be required to meet the average loan amount target as calculated on the basis of amounts disbursed each calendar year.** Banks implementing this Sub-component will have to comply with the same eligibility and other requirements as those implementing Sub-component 2.2.

61. For both Sub-components 2.2 and 2.3, banks will be free to set their own interest rates allowing serving the Project beneficiaries in a sustainable manner; however the banks will be selected through a competitive process to ensure that those offering the best conditions are chosen for the Project implementation. Banks will be eligible to apply for the implementation of both Subcomponents 2.2 and 2.3. **For loans issued within Sub-components 2.2 and 2.3, banks will not be able to apply for a guarantee under Sub-component 2.1.**

### **Component 3: Climate-resilient Rural Infrastructure**

62. This Component will aim at removing bottlenecks for reliable irrigation water supply, which inhibit increasing participation for *dekhans* and small private farmers (hereunder farmers) in enhanced commercialization of agriculture for selected value chains. This will be achieved through modernization of inter-farm<sup>32</sup> irrigation network operated by Water Consumer Associations (WCAs) and will provide conditions for targeted farmers' group to: (i) diversify agricultural production from low income to high value crops; (ii) increase productivity of cultivated lands; (iii) address challenges of drought and reduced water availability predicted due to climate change; and (iv) increase capacity of WCAs and Basin Administration of Irrigation System (BAIS) regional and district divisions in efficient water resource management and irrigation system operation and maintenance. Thus, the outcome of this Component is 'improved farmland productivity resulting from modernized irrigation infrastructure'

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<sup>32</sup> Tertiary irrigation network in case of Uzbekistan

measured by the following indicator: at least 1,000 farmers reporting improved supply of irrigation water and increase in production as a result of the adoption of modern irrigation techniques.

63. **Sub-component 3.1. Modernization of irrigation systems.** The following main activities are considered within this Sub-component:

- (i) Upgrading inter-farm irrigation schemes on over 3,500 ha at the inter-farm level to provide pressurized and filtered water to agricultural plots, which will allow *dekhans* and small farmers to install laterals and drip piping on their farms and connect to the system. This will significantly reduce the required investment cost for obtaining drip irrigation systems for *dekhans* and small farmers.
- (ii) For demonstration purposes, introduction of five solar-powered meteorological stations for online monitoring of climate data, soil moisture, estimation of crop water requirements and irrigation scheduling over 500 ha (100 ha per station). Each station will collect data from 10 remotely distributed soil moisture and rain/irrigation sensors, will analyze and process the data to provide recommendations for scheduling of irrigation, warn on the diseases of crops, expected frosts, etc. Irrigation in the right quantities and at the right time is essential and can substantially improve water use efficiency and increase productivity of lands.

64. The following main technical options are considered for modernization of inter-farm irrigation systems: (i) replacement of open inter-farm concrete flumes or earthen canals with closed irrigation pipes to provide pressurized and filtered water; (ii) reconstruction of deep wells connecting to pipe networks; (iii) installation of electrical or portable diesel pumps and pipe networks.

65. **Sub-component 3.2. Increasing capacities of WCAs and BAIS divisions to operate modernized irrigation systems.** Water management at state, provincial and district level is under the Ministry of Agriculture and Water Resources (MAWR), which is responsible for water distribution and delivery to the inter-farm distribution level operated by WCAs. There are 365 WCAs operating in the Fergana Valley. After Uzbekistan gained independence there was a change in the water resources administration from formerly applied regional and district-based administrative water management system, into basin water management system based on hydrological principles. The latter involved the creation of the Basin Administration of Irrigation System (BAIS) in 2003, composed of the Authorities of the Main Canals, Divisions for Operation and Maintenance of Pumps Stations, and Authorities of Irrigation Systems (AISs). Overall ten BAISs have been established and are currently operating in the Fergana Valley.

66. Modernization of the irrigation network at the inter-farm level for provision of pressurized and filtered water will increase the role of WCAs for operating such schemes and will improve efficiency in water distribution. The WCAs will play an important role in identification of required investments through a thorough discussion with member farmers and application for systems modernization. The final decision on selection will be done by the PMU based on set of clearly defined criteria and selection procedure.

67. To ensure the sustainability of investments the WCAs and AISs will be provided with relevant trainings for capacity building in management, operation and maintenance of modernized inter-farm schemes. Trainings will be arranged and conducted by a Consultant (responsible for design and supervision of modernization works), to be selected on competitive basis.

68. Training sessions also will be conducted for WCAs and AISs benefitting from pilot agro-meteorological stations for development of skills to operate stations in 5 pilot areas. These trainings will be conducted by the supplier of stations selected on a competitive basis.

## **D. Lessons learned and adherence to IFAD policies**

### **Lessons learned**

69. IFAD started operating in Uzbekistan in late 2013 when first project, the HSP became operational. There is data on immediate outputs, but these investments have not yet sufficiently



evolved to have outcome data. The HSP has reached out to 1,503 households, provided training on crop production and technologies for 1,322 people (8 percent women), and given loans for 304 *dekhans* and private farmers for a total value of around US\$ 8 million. This has been for establishment and improvements of orchards and vegetable fields, introduction of modern production technologies, investments in agricultural machinery, cold storage and processing facilities. Appendix 3 provides an overview of the lessons learned from the past ongoing IFAD and other donors' operations in the country<sup>33</sup>.

70. The main lessons to emerge from IFAD limited experience are related to Project Management. These are:

- Project management - some constraints have emerged with respect to limited institutional capacity. There has been difficulty in attracting qualified local personnel, limited knowledge in project management and technical expertise as well as staff retention. Moreover, the location of the main PMU in the capital, Tashkent, has meant that direct inter-action with stakeholders and beneficiaries is limited;
- Government Processing of Investment Proposals - The Government has a requirement for a Government-led feasibility study for each donor project. This requires significant time and resources, and points to the need of conducting project design and government processing in parallel, rather than sequentially.

71. There are also lessons apparent from consultations with the main development partners in Uzbekistan, and a review of experiences from neighbouring countries with similar history and conditions. These include:

- Investment interventions are likely to be more successful in the areas where common ground and understanding of development paths exists between the financing institution and the government;
- The use of pilots, demonstration of practical farm-level results, and the dissemination of these outputs, are appropriate vehicles for the spread of potential sources of innovation/ productivity;
- Identified beneficiaries should be incorporated into clusters and production/ processing chains to reduce costs and to take advantage of group formation/ training, collective market links/ outlets, and economies of scale;
- Commercial financing institutions need to be supported in order to provide incentives for their expanded outreach in rural areas, including capacity building for field-level operational staff;
- IFAD can be a strong catalyst for private and public partnerships to support smallholders when its projects present a clear framework of collaboration and conducive institutional environment for cooperation;
- Demand-driven approach to value chain development, focusing on those sub-sectors demanded by the target groups, is effective in terms of sustainability of the results and reaching out the target;
- Strategic partnership with private enterprises which are willing to improve value chain competitiveness at the same time to expand and deepen backward linkages with small scale farmers can result in the latter's successful integration in the value chains;
- Value chains development projects need to identify bottlenecks and opportunities at all critical points along the entire chain (from production, aggregation, processing, marketing and consumption) and engage key stakeholders (including research, extension and safety), delivering both private and public goods.

72. **Lessons from international experience on Guarantee Schemes.** The World Bank and FIRST Initiative organised a Task Force for the Design, Implementation and Evaluation of Public Credit Guarantee Schemes for Small and Medium Enterprises, which represents international associations of both CGSs and lenders<sup>34</sup>. Main findings of this Task Force include that CGSs to be successful have to: a) be independent, have adequate funding, mixed ownership and independent

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<sup>33</sup> Neither of the two IFAD-funded projects (HSP and DVCDP) has reached the implementation stage whereby their performance can be assessed with evidence and results on the ground.

<sup>34</sup> Principles for public credit guarantee schemes for SMEs. The World Bank, 2015.

supervision; b) have a clear mandate, corporate governance structure, independent Board of Directors, internal control framework and risk management; c) operate with clear selection criteria for SMEs, lenders and credit instruments and offer partial guarantees that comply with prudential regulation and provide capital relief to lenders; d) offer risk-based pricing policy and an straight forward claims process; and e) monitor and evaluate performance both internally and externally and publicly disclose non-financial information periodically.

### **Alignment and harmonization**

73. The Project is closely aligned with and in support of the Government's key priorities for diversification and modernization of the agriculture sector as expressed in the Welfare Improvement Strategy of the Republic of Uzbekistan for 2013-2015 (WIS II) and the Presidential Decree No.2460 on agriculture sector reforms and development for 2016-2020, with latter stressing the need to gradually shift from cotton and wheat to more value added commodities as well as on the introduction of resource-saving technologies.

74. Seeking to avoid duplication of efforts, foster complementarities, while taking advantage of business-related best practices and technological innovation, the overall intervention strategy will be based on: (i) partnership building with the country's private, commercial sector, and sectoral stakeholders; and local research institutions and industry associations, particularly for expanding technical assistance services and market channels; (ii) harmonization with initiatives from development partners present in the country, such as ADB, FAO and the World Bank; and (iii) overall adherence to the principles of the Paris Declaration on aid effectiveness.

### **Adherence to IFAD policies and guidelines**

75. The design of the ADMP is fully compliant with IFAD's policies on: **Targeting, Gender Mainstreaming, Rural Finance and Climate Change**, and it is fully aware of the new **Social, Environmental and Climate Assessment Procedures**, and will seek their compliance in Project implementation at operational and field levels (see Appendices 2, 3, 4 and 5 for details).

76. Accordingly, the Project, which is based on key training, technical assistance, educational and technological development and dissemination activities and investments, will promote a gender-sensitive and enabling implementation environment through its farming and processing promotion components. IFAD's targeting requirements are addressed by ensuring that rural women, women heads of household, the rural unemployed and young people, do participate in the Project's activities.

77. Activities under the Project will be in line with IFAD's approach to scaling up results<sup>35</sup> – since IFAD's interventions will leverage substantial financial resources of existing local partners (banks and development funding institutions). It should be noted that the Government views IFAD as a specialized rural development agency that has the skill to develop and apply innovative approach to the economic and technical needs of rural populations, thus increasing the pace of rural transformation that is currently underway. The current IFAD interventions, in support of production using value chain approach and targeting *dekhans* and small private farmers, are seen as innovative in the country context. There is also evidence that modestly-scaled IFAD interventions to pioneer new methods, approaches and engagement tools are already serving as a model for other investment by Government, development partners and the private sector. The World Bank, the Asian Development Bank and the European Commission are currently implementing or planning to implement major interventions in horticultural and dairy sub-sectors, in collaboration with the GOU.

78. The development of new innovative financial products for agriculture will also contribute to the scaling up approach: Project support for the Rural Guarantee Facility, credit lines with built-in TA, as well as encouraging the banks to act as agents delivering business development advice to borrowers is expected to leverage much larger resources from local banks and development funding institutions.

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<sup>35</sup> IFAD's operational framework for scaling up results. December 2015.

It will also build the capacity of participating banks to lend to the agricultural sector and manage their agricultural loan portfolios effectively and efficiently.

79. Thus, the scaling up approach will be applied in two of IFAD's main lines of business: rural finance and pro-poor value chains.

### **Environmental and social safeguards**

80. The Project is not expected to generate negative social impacts; it is expected to enhance rural family incomes and reduce the number of low-income families, contributing to improved livelihoods. Direct environmental or climate change impacts from the Project are negligible and can be improved or avoided through advice on and implementation of sustainable agricultural management practices. Addressing climate change can be improved through Project activities, in particular through adaptation opportunities such as through Component 3 (climate-resilient rural infrastructure), but also raising awareness and building capacity for implementing innovative agricultural practices (Components 1 and 2).

81. Depending on the type of diversification and/or modernization activities the entrepreneurs/borrowers will undertake, impacts can vary. For example, currently, the use of agro-chemicals in the region is low, however this could have the potential to change because of increased economic liquidity. In the case of agro-industries, these would be modernized, but more agro-industries could cause increased pollution. The potential impacts of aquaculture (e.g. on effluents) should also be noted.

82. The Project will also invest in the development of micro- small- and medium-scale enterprises within the selected value chains that will have site-specific environmental and social impacts. To mitigate these impacts, environmental assessments and compliance with national legislation will be built into the Project's formal operational procedures governing investment decision-making.

83. Moreover, demonstration of technology innovations (minimum-till, drip irrigation, agro-metrological stations, legume trials, etc.) are expected to address environmental issues related to sustainable use of natural resources and potential additional on-farm income.

84. **Environmental classification.** The ADMP is classified as category "B". No significant environmental impacts are expected to arise from Project activities; the Project targets IFAD vulnerable groups including women and youth, and supporting diversification will contribute to diversified income generating activities but also diversified diets. No major infrastructure works are part of the Project; agricultural diversification and modernization activities, linked to agri-business development and to agricultural production systems, could have potential impacts but these are negligible. Climate-resilient rural infrastructure will incur positive environmental benefits.

## **III. Project implementation**

### **A. Approach**

85. The ADMP seeks to increase inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved natural resources Project support would be delivered in the context of a management approach that is targeted, demand-driven and inclusive.

86. The Project will promote a **demand driven** approach for value chain development. Such an approach would not require the pre-identification of value chains in the agricultural sub-sectors to be supported by the Project, but rather focus Project investments on those sub-sectors as demanded by the targeted smallholder farmers. The value chain approach will focus on analysing the potential in general and that of various players, in particular in each step of the value chain. It will focus investments on those weak points which have the potential for improving productivity, profitability and competitiveness of the value chain players, particularly focusing on *dekhan* farmers.

87. **Evidence-based identification of inclusive value chains and key actors.** Results of Rapid Market Assessments for those sub-sectors considered relevant and potentially beneficial for smallholders<sup>36</sup> will inform the process to identify the value chains that are/can be inclusive. Private sector operators will have critical roles to play as Project partners ('champions'). These studies will enable the Project to select private enterprises in a way that is objective and transparent at the same time with strong focus on inclusiveness. After expressing their interest, the private enterprises will become the Project's Leading Entities (LEs) and entitled to Project support to elaborate their value chain development plans ('roadmaps').
88. **VC Upgrading.** The Project will promote upgrading of selected value chains and will include actions taken by producers, processors, input suppliers and traders at various points in the value chain to increase future productive capacity and competitiveness.
89. **Complementarity and Synergies between Components.** The LEs with successful VCDPs prepared under Component 1 will be favourably considered for receiving loans from PFIs under Component 2. While loan applications will be assessed individually, the Project will provide complementary support to enhance their business operations through provision of technical assistance and training to farmer suppliers and other actors as well as access to improved infrastructure under Component 3 to enhance overall competitiveness and efficiency of the value chains.
90. **Market-based approach.** The Project will not interfere with participating financial institutions' (PFI) pricing policies to avoid market distortions and ensure the financial strength and sustainability of PFIs. It will also provide support to the existing Guarantee Fund for Small Entrepreneurship Support through the provision of guarantee capital and technical assistance to develop the Fund's capacity to guarantee loans to small agricultural businesses. This way, credit guarantees will be fully integrated into the financial market and managed by a dedicated institution.
91. **Coordination with other projects.** Ongoing and pipeline projects of other agencies (World Bank, ADB, EU, etc.) also provide support targeting at value chain stakeholders in the horticulture and livestock sectors. The ADMP will promote close coordination, especially with those projects also under the Rural Restructuring Agency (RRA), based on smooth information flow and open dialogue in order to ensure sound synergies and avoid duplication of efforts.
92. The Project explicitly incorporates the following actions:
- Facilitating smallholder farmer-to-agribusiness formal arrangements for the production of raw material according to the buyer's specifications, adequate aggregation and cold chain management, mentoring through the Project to facilitate the adoption of the new business models, etc.;
  - Facilitating the development of inclusive value chains (focus on smallholder producers, women-entrepreneurs and youth) and providing the advisory services required to formulate the VCDPs for access to the Project's financing products (TA, guarantee facility and credit lines);
  - Elaborating a Gender Action Plan (GAP) that stipulates gender mainstreaming of Project activities as well as setting gender-sensitive targets;
  - Contributing to overall government's priorities and efforts to diversify and modernize the agriculture sector;
  - Establishing and supporting, both: (i) the 'brokerage' function, through an efficient ADMP technical team (i.e., technical advisers, Regional Coordinators/Value Chain Development, Rural Finance Officer, Irrigation Engineer, etc.); and (ii) a suitable M&E/KM system that will follow-up on the key outcome-output performance indicators.

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<sup>36</sup> Rapid End Market Assessments for four value chains (apiculture, fisheries, sericulture and small ruminants) were undertaken during the design (see Project Life File). More assessments (at least another four) are planned at the beginning of Project implementation

## B. Organizational framework

93. The Project will largely be organized and managed along the same lines as the HSP, which has taken a partnership approach in the implementation of project activities between the State, the private sector, technical service providers and civil society.

94. The Ministry of Agriculture and Water Resources (MAWR) will have the overall responsibility for management of the Project on behalf of the Government of Uzbekistan.

95. Day-to-day oversight of the ADMP's management will rest with a PMU embedded in the RRA, a State entity within the MAWR.

96. **Project Oversight.** Overall management oversight of the Project will rest with an **Inter-agency Council (IC)**. The IC is an inter-governmental institutions agency for Cooperation with International Financial Institutions, Foreign Government Agencies and Donor Countries in Implementation of Large-scale and Strategically Important Investment Projects, and it shall provide guidance and direction to the Project Implementing agency. The ADMP Project Manager would act as Secretary to the IC. The IC would meet as required to: (i) review and approve the Project Implementation Manual (PIM) and Annual Workplan and Budgets (AWPB) including related procurement plans; (ii) review implementation progress and other monitoring and evaluation reports; and (iii) be advised of the results of the joint IFAD-MAWR Project supervision missions, and advise and initiate action on matters arising relative to ensuring the efficient and effective implementation of the Project in line with the provisions, terms and conditions of the Project Financing Agreement.

97. **PMU tasks/responsibilities.** Whilst the operations of the PMU will be founded upon the Results Framework (logframe) - which will facilitate: effective execution of Project activities; the monitoring of progress made; and the systematization of Project implementation experiences - the principal PMU activities comprise: (i) overall operations planning, M&E and financial administration, including budgeting, procurement, accounting and disbursement. This includes: (i) the preparation of the AWPBs, and the corresponding operational plans for each line of action; (ii) Project management as pertaining to loan administration and the actual field investments and activities; (iii) plan for socioeconomic and baseline studies (RIMS system), exercise gender and legal advisory functions, and set up the systems and operational structures for Project learning and KM; (iv) submission of proposed VCDPs to the Selection Panel; (v) follow-up and supervise Project operations at field level, paying attention to the requirements of components and activities and the proper follow-up of pilot initiatives, including TA to primary production/processing and to PFIs; (vi) implementation support to the: associated implementing partners; organized farmer groups of beneficiaries; PFIs; and other entities active in the participating VCs and ultimately to the Project's primary target groups of *dekhans*, small private farmers, related agribusiness entrepreneurs and market services providers; and (vii) provision of the required reports to government entities and IFAD according to the Project Financing Agreement, i.e., RIMS surveys, mid-term and final evaluations, etc.

98. **PMU staffing.** The PMU for the ADMP will be headed by a Project Manager and be composed (preliminarily) of: a Chief Accountant; a Procurement Officer; a Gender/Youth Officer; an Administrative Assistant/Translator; and a Driver. The ADMP will use HSP/DVCDP legal staff. In addition, the Project will count on the services of national and international specialists in various fields.

99. A Project Implementation Team (PIT) will be established in one of the regions of the Project area from PY1 (TBD by the Government, but more likely in Namangan). The PIT would comprise a: Regional Coordinator (Value Chain and Business Specialist), Rural Finance Officer, Engineer and M&E Specialist. Regional Coordinators will be recruited to coordinate Project activities in the other remaining oblasts. The PIT will be responsible for day-to-day implementation in the field of all aspects of the Project, with the exception of financial administration and procurement, which will be managed entirely by the relevant personnel of the RRA/ADMP PMU at central level.

100. The PMU/PIT will coordinate the work of competitively selected private service providers, consultants and participating financial institutions (PFIs) that will interact with VC actors on planning

and financial matters. VCDPs will be prepared by those private service providers/consultants working with VC LEs and other VC stakeholders. The Project design team assessed a number of potential private service providers/consultants and confirmed that sufficient capacity exists in the private sector for VCDP and business plan preparation.

101. Terms of Reference for key Project staff and consultants are detailed in Appendix 5, Annex 1.

## C. Implementation strategy

102. The Project's implementation aims at achieving the following three outcomes, through their corresponding components: **Outcome 1. Enhanced capacity for sustainable and efficient performance of targeted stakeholder; Outcome 2. Productivity and efficiency along targeted smallholder-inclusive value chains increased; and Outcome 3. Improved farmland productivity resulting from modernized irrigation infrastructure.**

### Component 1. Inclusive Value Chains Development

103. Activities under **Sub-component 1.1 Enabling Business Environment for Inclusive Value Chains** will be led by Regional Coordinators who will be supported by a team of qualified experts (2-3 international value chain advisers, 4-6 national business specialists).

104. **Value Chains Mapping** of the four sub-sectors (sericulture, fisheries, apiculture and small ruminants) for which Rapid Market Assessments were completed during the design, will be conducted at the onset of the Project. The exercise will include the following main steps:

- Review the results of the four Rapid Market Assessments, and prepare a list of all the identified enterprises. The enterprises are classified by region, sub-sector and type of business (aggregators/traders (e.g. agri-firms), processors, storage operators, exporters, etc.);
- Organize meetings with regional *hakimiat* in each region to verify and, if necessary, modify the list; if necessary visit rayon *hakimiat* and/or any other local informants. Special care must be taken to identify large farmers who also take up other roles on the value chain (such as aggregating products through purchasing from neighbouring farmers);
- Assess each enterprise's existing and/or potential linkages with the Project's main target groups (*dekhan* and small private farmers), and rank them by strength of the linkages;
- Organize a meeting in each region, inviting those enterprises that have satisfactory linkages (existing or potential), to inform them of the Project outline, opportunities and conditions for participation (such as having the legal status), and request them to send Expression of Interests to the PMU; and
- Finalise the list of interested enterprises.

105. The same team of experts will conduct **Rapid Market Assessments** for four additional sub-sectors. The PMU, in consultation with the MAWR, will identify the suitable sub-sectors and propose to IFAD for its no objection. Once approved, the same **Value Chains Mapping for the additional sub-sectors** will be conducted.

106. The enterprises which expressed their interests to become Project partners as LEs will be assisted with the preparation of a VCDP, also called 'Roadmap'. Each VCDP will be based on a format stipulated in the PIM. A sample VCDP is presented in Appendix 4, which is based on a life example prepared within the DVCDP. Preparation of VCDPs will be supported by a team of experts (possibly the same people as for VC mapping and market assessments), who will provide LEs with guidance, facilitate their interactions with farmers, *mahallas*, industry associations and other potential resource persons and institutions, as appropriate.

107. Regional Coordinators will take the overall responsibility for coordinating the process of LE's VCDP formulation. They will guide the process through close communications with the LEs and facilitate their interactions with farmers through linking them with *hakimiat* and *mahallas*.

108. Each VCDP will be assessed against predetermined criteria that will focus on competitiveness/soundness of business orientation and inclusiveness. These are defined as follows:

**Competitive:** meeting market demand and maintaining or growing market share.

**Inclusive:** providing benefits to small-scale farmers, including women.

109. The PMU will determine the total score for each VCDP on the basis of the above two parameters, each on the scale of 1-5. VCDPs that will have positive impacts on women will receive a bonus score. Final selection will be made by a panel of external persons (five to seven members), including those from the private sector, industry associations and relevant Projects/projects with good track records such as USAID's Uzbekistan AgLinks project.

110. The Selection Panel will also provide recommendations whether LE's shall receive TA in relation to farmer training and optional measures to address social and environmental issues (under Sub-component 1.2). Criteria for approving the LE's access to TA for farmers' capacity building would include: consistency with the VCDP; appropriateness of the proposed assistance to fulfill the business plan; estimated cost; and potential to reach out to other farmers beyond immediate suppliers. Selected LEs will notify one of the Project PFIs, which will start appraisal process of the submitted loan application (under Sub-component 2.2). Simultaneously, the LEs will start preparing detailed proposals for farmer training. Sequencing of VCDP's implementation will be based on a first come - first serve principle.

111. **Sub-component 1.2 Capacity Development for Value Chain Stakeholders** comprises activities to strengthen the capacities of the following value chain stakeholders: **LEs, mahallas (communities), farmers, veterinary services, research institutions and industry associations, the MAWR and plant quarantine laboratory**. The following sections outline how these activities will be implemented.

112. **Support to LEs.** Selected LEs will receive training on business management, technical matters and other topics which are important for successful business operations. Courses will be given by qualified specialists competitively identified by the PMU, including those working on existing horticulture and livestock VCs (WB, ADB, EU, USAID, etc.). Several courses addressing different topics will be organized, and each LE will be given an opportunity to send its representative to the course of its preference. The PMU will also organize regional workshops for LEs to discuss and raise awareness on the measures to improve inclusiveness of VCs. Regional Coordinators will take the lead for organizing the workshops, including selection of panellists and resource persons. Those LEs whose proposal included measures to address social and environmental issues will receive specialised LE-tailored advisory support by qualified specialists. The PMU will identify suitable advisers on a competitive basis. TORs for business/technical advisers are provided in Annex 1 to Appendix 5.

113. **Support to mahallas.** *Mahallas* in the catchment areas of the LEs will receive support in organizing meetings to raise awareness of the Project, coordinating with LEs, facilitating farmer training (including ensuring the participation of poorer farmers, women and youth) and participating in monitoring activities. The PMU will engage a competitively selected, qualified national consultant as Social Mobilizer, who will take the overall responsibility for planning and organizing meetings with *mahalla* representatives (a total of 120 meetings each with five representatives). S/he will also prepare communication materials, including the Project brochure and a note to guide the representatives on undertaking their actions at their own *mahallas*.

114. **Support to farmers.** Project support for farmers in the Project area will be through demonstrations and FFS. The PMU will prepare contracts with individual successful farmers or agri-enterprises in each region (or district) - up to 320 contracts are expected with provision for approximately 20 participants each, and up to 90 FFS will be organized.

115. Districts could be those where no LEs are present, in communities where farming enterprises other than what LEs focus on seem promising, or as special enterprises which appeal to youth or women entrepreneurs. The PMU will recruit one or more national FFS Management Specialists (up to 60 work-months over six years) to facilitate setting up and managing the FFS. An experienced Uzbek

institution<sup>37</sup> will be contracted to operate the FFS depending on the demands of LEs. FFS may be implemented using similar methodology as employed under the FAO Technical Cooperation Project TCP/UZB/2903 – *Sustainable agriculture practices in drought affected regions of Karakalpakstan, Uzbekistan*, 2003-2007. It is expected that the FFS will reach up to 2,250 beneficiary farmers and their families.

116. **Support to veterinary services.** The PMU will recruit international technical assistance (4 work-months in 2 trips) from a Food Animal Veterinarian for refresher training on delivery of field veterinary health and production medicine services to oversee establishing the herd health practices within *mahallas* and train competent Uzbek vets in extending this concept to other districts and *mahallas*. The Food Animal Veterinarian will provide short refresher courses and provide mobile veterinary services for herd health practice and production medicine activities in the field.

117. The PMU/RRA will have a Memorandum of Understanding with the State Veterinary Committee (SVC) for implementation of respective activities related to upgrading of Zoo-Veterinary Stations, Vet Mobile Clinics and Animal Identification.

118. Contracts for refurbishing and upgrading of three demonstration Zoo-Veterinary Stations and procurement of Vet Mobile vans as well as for setting a pilot Animal Identification system (database software development and running, procurement of ear tags) will be tendered by the PMU in close coordination with the SVC. Modern veterinary practice and livestock production equipment will be provided for each demonstration station and mobile clinic according to a list prepared by the Food Animal Vet. The Project will be encouraged to pull all the international TA within this activity under one contract with the OIE, based on the successful experience of the IFAD-financed Livestock and Market Development Project in Kyrgyzstan with similar activities.

119. Study Tours to several countries will be arranged by the PMU. Study tours could be hosted through a contact with an individual veterinarian or a professional veterinary association in each country.

120. **Support to research institutes and industry associations.** The PMU will enter a contract with BWA for its delivery of the services in support of female entrepreneurs and unemployed/underemployed youth in the Project area. The PMU will facilitate youth's access to credit by placing a national consultant within the CCI. The PMU will provide funds for a research contract to the SRI LPF based on the proposal prepared by the SRI LPF. The proposal needs to clearly indicate outputs, outcomes, activities, a workplan and the related budget. In addition, the PMU will recruit an International TA for up to five months (three separate missions) in order to provide refresher training to the SRI LPF staff as well as to assist in devising a research protocol.

121. When industry or commodity associations identify VC development constraints and request assistance to remove these constraints, the Project will meet these requests. The PMU will contract local experts to carry out a needs assessment. S/he will prepare a report on the constraint, assess its significance and recommend a plan of action to alleviate the constraint. S/he will draw up tender specifications for equipment and supplies, and TORS for TA. The PMU, local government and/or industry/commodity association will agree on where the equipment will be situated and who has the responsibility for managing and/or operating the equipment. Likewise, agreement will be reached on who will receive technical training if needed.

122. **Support to Plant Quarantine Laboratory.** The PMU will commission a local engineering firm to design and supervise construction of a Regional Plant Quarantine Laboratory in the Project area. The supplier of lab equipment will provide training in use of all laboratory equipment.

123. **Support for quality and safety standards compliance.** The Project will strengthen the capacity of public and private sector to harmonize and develop standards. To do so the PMU will establish a Group of Experts on harmonization of regulations and standards of quality of selected agricultural products, and it will provide technical assistance and training on introduction of regulations

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<sup>37</sup> The Uzgiplomeliovodhoz Institute, MAWR, is suggested.



and standards. The Project Manager will help the MAWR with designing, establishing, and accrediting the public laboratory within the MAWR's Centre for Certification and Standardisation. In addition, he/she will work with the Group of Experts and Technical Committees on harmonization of regulations and standards of quality of agricultural products/commodities and follow up on their activities; carry out the dissemination campaign; and select on a competitive basis qualified consultants for conducting training according to the preset modules.

124. **Support to MAWR Management Information System (MIS).** The PMU will contract a local IT management firm in close coordination with the related MAWR department to design the proposal for establishing such a MIS.

125. **Knowledge Management and Exchange.** The PMU will be responsible for planning and organizing study tours, select participants among the Project stakeholders, and solicit their reports. Similarly, the PMU will identify relevant international events and identify participants. The PMU will contract service provider/s for preparation and publications of materials (mainly videos), particularly on topics related to inclusive value chains development, smallholders' access to credit and innovations.

## **Component 2. Inclusive Rural Finance**

126. **Sub-component 2.1. Rural Guarantee Facility (RGF)** will be implemented by the State Fund for the Support of the Development of Entrepreneurial Activity (State Fund) – newly created on the basis of the Guarantee Fund for the Development of Small Entrepreneurship (Guarantee Fund) established in Uzbekistan in February 2017 with the purpose of “further improvement of business climate and deepening of market reforms, creation of more favourable conditions to accelerate the development of small businesses through expanding their access to credits provided by commercial banks for acquisition of modern technological equipment, development of production of competitive goods, demanded in domestic and export markets, and increasing on this basis of the role of small entrepreneurship in social and economic development of the country.”<sup>38</sup> The Project will invest US\$ 9.9 million in the **State Fund** to provide capital for the dedicated Rural Guarantee Facility placed within the State Fund.

127. Upon effectiveness, the RRA/PMU will start the process for establishment of the RGF Steering Committee (SC) composed of representatives from the MOF, the SFSBD and the MAWR/RRA. The SC will offer strategic guidance and oversight to RGF. The SC will assess (with the assistance of IFC) SFSBD's operational adequacy and readiness to manage RGF. Once RGF is established, it will operate in line with the procedures outlined in its manual developed with support from the Project in coordination with the International Finance Corporation (IFC). An international consultant will be hired to develop the guidelines, provide TA and launch RGF. Specifically, the guidelines will ensure that a significant part of the default risk will stay with the retail institutions to: avoid moral hazard and adverse selection; address risks involved in serving the target group; and develop incentives for correct claim and settlement, in line with IFAD's Decision Tools for Rural Finance, international best practices and the World Bank Principles for Public Credit Guarantee Schemes for SMEs.<sup>39</sup>

128. The MOF will be the custodian of the US\$ 9.9 million (the Funds). The MOF will offer a counter-guarantee to the SFSBD. The counter guarantee will stipulate that the MOF is acting as a guarantor to the SFSBD for extending portfolio guarantees to selected PFIs for issuing credit for rural on or off-farm investments (with priority to the ADMP beneficiaries), up to a maximum of US\$ 30,000 (or equivalent), in the Fergana Valley. The counter-guarantee will also specify the terms under which the SFSBD can extend partial guarantees to selected PFIs.

129. The selection of PFIs will be entrusted to a Selection Panel (SP) consisting of at least 7 members from the MOF, the SFSBD and the MAWR/RRA. The SP will first assess proposals for

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<sup>38</sup> Presidential Decree No. No.PP-2768 of 10 February 2017 “On the creation of the guarantee fund for the development of small entrepreneurship.”

<sup>39</sup> The World Bank and FIRST Initiative. 2015. Principles for Public Credit Guarantee Schemes for SMEs. Washington, DC: World Bank.

eligibility and non-exclusion and will award portfolios to the selected PFIs. Eligibility criteria should include: a) size of rural portfolio (10% weight); b) operational capacity (20% weight); c) agricultural loan appraisal (25% weight); d) customer service (25% weight); e) offered interest rate (15% weight); f) pertinent products (5% weight).

130. Each PFI will have to leverage loans for an amount of minimum 5 times its awarded portfolio guarantee, within 3 years of operation. Unused guarantees will be revoked and redistributed to other applicants, according to the most updated ordered list. The allocated total of US\$ 9.9 million will be tendered in tranches subject to good performance of RGF (full utilization of the guarantee, leverage higher than 5 times, loans targeted to intended beneficiaries and delinquencies lower than 7%). The first tranche (expected to take place one year after effectiveness) will offer US\$ 3 million worth of guarantees. The second tranche will be launched one year later and will offer US\$ 3 million. The ADMP's Mid-term Review will assess the RGF's performance and will determine a release schedule of subsequent tranches.

131. **Sub-component 2.2: Credit lines for agriculture diversification and modernization** and **Sub-component 2.3: Special credit window for youth** will be implemented by the PMU. Specifically, the Project Manager and Regional Rural Finance Officer will be involved in the management of Sub-components 2.2 and 2.3.

132. Given the situation in the financial sector where non-bank financial institutions are weak (a rural sector assessment is found in WP1) the credit lines will be made available to banks. The **selection procedure** of banks will be documented in detail by the PMU and comprise of the following stages (described in detail in Appendix 5):

- Announcement of the Project and collection of initial expression of interest on the part of banks;
- Bank screening against the minimum eligibility criteria;
- Bank due diligence; and
- Submission of financial and operational proposals and decision on bank selection.

133. The Selection Committee should assess the operational and financial proposals of the eligible banks (those which successfully passed the due diligence) and award the funding based on this assessment. The Selection Committee should apply a ranking method to evaluate the proposals and award requested amounts based on the strength of the proposals. Following negotiations with those ranked, and if agreement is reached, a Subsidiary Loan Agreement (SLA) will be signed with each selected bank. Provisions for SLA are detailed in Appendix 5.

134. Credit lines will be available in foreign currency for beneficiaries engaged in import and export activities, and in local currency for the rest of the beneficiaries.

135. A formal due diligence will be conducted in banks meeting the basic eligibility criteria and demonstrating their interest and commitment in implementing the project. International TA will be hired by the Project to conduct the due diligence process.

136. **Built-in technical assistance to banks – installation of the automated agricultural loan analysis and management system – CLARA (Cash-flow Linked Agri-Risk Assessment tool) by PFIs.** Prior to loan disbursement to end borrowers, the banks selected for the implementation of Sub-components 2.2 and 2.3 will be required to adopt a specialized web-based system, developed by IFC and tailored to the agricultural sector of Uzbekistan - CLARA. CLARA will allow for detailed loan analysis, including the assessment of agricultural business risks and the development of repayment schedules matched to the seasonality of agricultural businesses. It will also allow for the management and monitoring of loan performance, as well as the analysis and risk management of the whole agricultural portfolio, including concentration risks, sensitivity tests, comparison with similar businesses, and other types of analysis. Moreover, the system will allow for the dissemination of business development advice by PFIs to agricultural borrowers as it contains “technical charts” for various agricultural sub-sectors (checklists outlining key processes and stages in agricultural cycles with specific guidance on their implementation). The adoption of the system will be accompanied by

training of banks' staff and 1.5 – 2 years of TA (as required) on the use of the system and maintenance provided by IFC experts.

137. Banks will obtain access to the CLARA system upon signing an agreement with IFC. IFC experts will conduct a preliminary assessment of each bank to determine the level of the bank's readiness to adopt the system and the type and scope of the technical assistance required to launch and use the system. The cost per installation may vary from US\$ 10,000 to US\$ 30,000 depending on the bank's level of preparedness, capacity and expertise in lending to agriculture. Banks will be required to co-fund at least 30 per cent of the installation costs (between US\$ 7,000-10,000) and the Project will provide the remaining 70 per cent. Upon launching the system, banks will be required to use it to analyze all loan applications and monitor and manage all loans issued within the Project. The Investment Guidelines to be developed for the Component's implementation will have to reflect the adoption of the CLARA system– as it will influence the PFIs' loan application forms, portfolio monitoring reports, etc.

### **Component 3. Climate-resilient Rural Infrastructure**

138. Implementation of Component 3 will be managed by the PMU, through central office and Project Implementation Team (PIT) at the project area level. The PMU/PIT will be responsible for: (i) selection of a design company (hereinafter the Consultant); (ii) review and final approval of applications; (iii) managing the design, implementation and supervision of works; (iv) managing the training of O&M staff; and (v) monitoring and evaluation of the Project results. The Irrigation Engineer in the PIT will be responsible for overall management of the component. Provisions are also made for involvement of short-term international technical assistance for design of drip irrigation systems.

139. **Sub-component 3.1 Modernization of irrigation systems** will be implemented on a *demand-driven* basis, based on the applications submitted by WCAs after thorough discussions with member *dekhans* and small private farmers. Prior to collection of applications the PIT at region level will conduct an information campaign through a series of workshops to sensitise the local authorities, BAISs/AISs and WCAs on the project/component objectives, its modalities, implementation arrangements, selection criteria and procedure, and application forms. Applications will be submitted to the Consultant that will conduct qualification, feasibility studies, ranking as per the procedures described in the PIM and will submit recommendations for final selection to PMU for final review and approval.

140. WCAs, with technical support from BAIS district divisions (AISs), will identify inter-farm systems within their area that could be suitable for the project support. Groups of neighbouring *dekhans* or small scale farmers under these potentially suitable inter-farm systems, who intend to install drip irrigation system for their cultivated lands (may vary from 50 to 150 ha). The higher level systems from which the proposed tertiaries are supplied with water (pump station, deep well or main and secondary canals) shall be in a sound technical conditions, i.e. infrastructure rehabilitated/modernised by the Government or under other donor funded projects such as the WB project<sup>40</sup>. Following the approval of the investment proposals list the Consultant will proceed with development of detailed engineering designs. Procurement of works will be conducted by the PMU, while the supervision of works will be under the responsibility of the Consultant under the overall monitoring of PMU/PIT. Farmers will be responsible for installation of required laterals and field piping from their own resources or from the financial means to be provided under the Component 2.

141. **Sub-Component 3.2: Increasing capacities of WCAs and BAIS divisions to operate modernized irrigation systems.** Trainings on management, operation and maintenance of modernized inter-farm irrigation systems will be conducted by the Consultant based on actual system designed and built.

142. **Training on Agro-meteorological stations** will be conducted by the supplier of agro-meteorological stations for relevant WCAs and AISs staff.

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<sup>40</sup> WB Fergana Valley Water Management Project Phase II (to be started within 2017)

## D. Planning, M&E, learning and knowledge management

### Planning, M&E and learning

143. The Project's Results Framework would form the basis for the overall results-based monitoring and evaluation (M&E) system and comprise performance monitoring and impact assessment. The PMU M&E Officer would have lead responsibility for all internal M&E of the Project.

144. **Performance monitoring** will concentrate on the financial and physical outputs and the outcomes of Project activities and be based upon semi-annual and annual progress reports. The PMU would submit progress reports in English to Government (the MAWR and MOF) and IFAD. Data sources for the annual performance reports will include: project baseline survey; semester physical and financial progress reports for each component; PFI records and project-related reports including Business Plans; qualitative interviews and case studies with small-scale primary producers and market services providers, LEs and new employees; and reports on challenges and project facilitation strategies. Implementation responsibilities prepared by the thematic experts, staff and consultants hired within the PMU and the PIT.

145. **Outcome monitoring** will assess the use of outputs and measure their benefits at beneficiary level. The monitoring will focus on the accessibility of Project outputs and the extent to which they provide benefits to the target groups in terms of access to finance, services, and markets. It will also include the Project's achievements in terms of returns, added value, direct and indirect job creation, and prospects for sustainability. An initial set of **indicators** has been provided in the Project's Results Framework, which will be refined and finalised as an output of the Project Start-up Workshop. The indicators will include also a number of the output and outcome Core Indicators (CI) released in the new IFAD Results and Impact Management System (RIMS). Advantage of including RIMS indicators will be in the contribution to the aggregated report on results at the corporate level. Data sources for the ADMP performance indicators will include: (i) the State Committee on Statistics; (ii) the Centre for Economic Research; (iii) the Ministry of Agriculture and Water Resources; (iv) all institutions involved; (v) beneficiaries; and (vi) the Project M&E database.

146. **Impact assessment.** In line with the new RIMS, four core indicators are identified for assessing the highest levels of results of the Project. Two of these at impact level: (i) percentage of Project beneficiaries reporting at least 20 per cent increase in production; and (ii) number of HHs receiving services promoted or supported by the Project (an outreach indicator, mandatory for impact level). Two at project development objective level: (iii) number of full-time job (equivalent) created; and (iv) percentage of supported small scale producers including *dekhans* reporting 20% increase in sales along the value chains. These indicators, together with the outcome indicators corresponding to the project investment components, will shape the Project's baseline survey. The objective of the baseline survey will be to establish benchmarks for the project objective indicators, including the mandatory outreach indicator for eventual comparisons (through surveys) during the MTR and end of the project. All M&E data will be disaggregated by sex poverty, farm type and youth categories and assessed relative to the Project's targeting and gender checklists (see Appendix 2).

147. A **Mid-Term Review** would be carried out towards the end of the Project's third year. The Review would cover, among other things: (i) physical and financial progress as measured against Project AWPBs; (ii) performance and financial management of PFIs and non-financial implementing partners such as R&D institutes and industry associations; and (iii) an assessment of the efficacy of TA, trainings and Project-supported rural finance and of their delivery to the Project's target groups of *dehkan* and private farmers, lead LEs, input suppliers and services providers and the rural unemployed. In addition, it is expected that the Review would look at institutional and policy changes arising from Project's activities, with regard to: the progress of capacity development interventions in support of the value chain stakeholders; the provision of rural finance; the socio-economic status of less advantaged rural women and men; and environmental impact. Review findings on implementation progress and any institutional and policy change would inform decision-making, as appropriate, on adjustments to the content, financing and targeting of the Project's components. The

findings and recommendations of the MTR would feed into any subsequent scaling up analysis, in particular with reference to the extension of the Project to expand the interventions through a subsequent PBAS allocation.

148. During the final year of Project implementation, as part of the preparation of the IFAD-required Project Completion Report/Impact Assessment (PCR/IA), 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. The Project completion process will include stakeholder workshop(s) to give project stakeholders the opportunity to: (i) evaluate the performance of the Project; (ii) to promote accountability; and (iii) to identify factors and responsibilities to increase the likelihood of sustainability, together with key success factors and shortcomings.

149. In addition to the M&E arrangements described above, external monitoring will comprise: IFAD supervision, including operational reviews of the Project, covering a random sample of activities; external audit, carried out on a yearly basis by independent auditors and under TORs acceptable to IFAD; risk-based financial management supervisions; ad hoc thematic/diagnostic studies; and a self-assessment Project Completion Evaluation conducted by the RRA/ADMP PMU in cooperation with IFAD.

150. **Learning and Knowledge Management.** To ensure capture of experience gained (learning), comprehensive provision has been made for M&E of Project activities. The Project's knowledge management program will be an essential element for delivery of project objectives, especially for dairy value chain related-learning. Two approaches will be taken: (i) a knowledge management program within the Project for purposes of supporting within and between Project learning; and (ii) support for a broader programme of knowledge management aimed at informing government decision-makers and influencing policy.

151. The "within Project" knowledge management activities will include a PMU programme of (i) technology testing and demonstration; (ii) exchange visits to regional countries; (iii) integration of Project learning into capacity building activities for the target groups; (iv) sharing of success stories through mass media and with IFAD; (v) "information corners" in *mahallas*; (vi) training of Project staff in communication skills; and (vii) maintenance of online information services.

152. During implementation, the Project would support efforts to broaden information dissemination through systematic development of farmer networks (to share knowledge on successful adaptation); farmer-to-farmer extension approaches (to facilitate technology transfer); development of private technical services (e.g., private veterinarians); and strengthening functional linkages between universities and R&D institutions and farmer networks to ensure the relevance of the technology innovation agendas. The PMU M&E Specialist, with the support of PMU, PIT technical staff and national and international consultants will produce communication materials summarizing some of the success stories to be distributed through networks, and through policy dialogue.

## **E. Financial management, procurement and governance**

153. **Governance and Financial Management Risks.** The country risk is rated as **High risk**. Transparency International's Corruption Perception Index ranked Uzbekistan 156 of 176 countries in 2016 (153 of 168 in 2015), with a score of 21/100 in 2016 (19/100 in 2015). In addition, information is not readily available. The latest Public Expenditure Financial Accountability Assessment (PEFA) assessment is dated 2013 but it has not been made public. Other donor diagnostic reports suggest that country PFM systems may not yet be ready for use in donors' projects. In order to mitigate the inherent risk, a standalone PMU will be established under the RRA with separate FM arrangements. This arrangement is already in place for the ongoing IFAD projects and some World Bank projects, and it has been assessed largely as satisfactory.

154. **Anticorruption and Good Governance Framework.** IFAD's applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive actions in all projects financed through its loans and grants. IFAD's anticorruption policy and whistle blowing procedures will be mainstreamed in the Project Implementation Manual.

155. **Financial Management.** During the Project design missions, a financial management risk assessment of the RRA was carried out to determine if it complies with IFAD guidelines for Project management. The RRA through its PMUs, is currently managing two on-going IFAD projects, and has established a reasonably well-functioning financial accountability systems and procedures. Following this model, a separate PMU under the RRA will be created to manage and coordinate the new Project. The PMU will make use of the RRA finance unit, which will assign financial staff to the Project as necessary. The PMU with the support of the RRA finance unit will be responsible for the financial management aspects of the Project including budgeting, accounting, preparing of withdrawal applications, monitoring of implementing partners, preparing consolidated financial reports and internal and external audit arrangements. Overall, the initial FM risk is rated as High but after the residual FM risk proposed mitigation measures have been met the final FM risk is expected to be medium. A summary of actions needed to mitigate FM risks is shown in Appendix 7.

156. **Accounting and financial reporting arrangements.** The PMU will be responsible for the financial management of the Project. The Project will maintain its accounting records in accordance with IPSAS-cash basis of accounting and record the expenditures in the accounting software 1-C, which will be configured to include the new Project. The accounting software will be specially designed to meet IFAD requirements including ability to generate Interim Financial Reports, annual financial statements, withdrawal applications, and statements of expenditure, etc.

157. **Financial reporting.** The PMU will prepare and submit to IFAD consolidated quarterly financial reports and annual financial statements. The financial reports will include at least the following information: (i) sources and uses of funds by financing source; (ii) incurred expenditures by component and financing source, (iii) actual expenditures vs budgeted expenditures by financing source by component and category, (iv) designated account reconciliations, (v) Statement of Expenditures - Withdrawal Application Statement, (vi) a fixed asset register, credit and (vii) Rural finance reports disclosing a) the amount of credit financed from the IFAD loan, b) the amount of credit financed from the revolving account, c) the amount of reflows to the revolving accounts by PFI and d) reconciliation of the revolving accounts. In addition a separate report on Rural Guarantee Facility will be furnished to the IFAD.

158. **Budgeting.** The IFAD Loan/Grant is viewed by the Government as part of the national budget. However, for Project management purposes and in accordance with IFAD procedures all Project activities will be included in a Project Annual Work Plan and Budget (AWPB) to be sent to IFAD for its no-objection at least two months before the beginning of the relevant fiscal year. The AWPB will indicate what activities and expenditures will be implemented and the extent to which budgeted expenditures are intended to be financed from each financing source. RRA staff has experience in preparing AWPBs to meet IFAD needs.

159. **Disbursement arrangements and Flow of Funds.** The Project will use available disbursement methods of replenishment, reimbursement and direct payments. Two separate Designated Accounts denominated in US\$ will be opened for the IFAD Loan and the IFAD Grant in a commercial bank acceptable to IFAD and will not be mingled with other funds. From the designated Loan/Grant account the funds will flow to the Project Loan/Grant account denominated in UZS to finance eligible expenditures under the project. From the designated loan account and the Project loan account, funds (USD or UZS) will also be transferred to incremental credit accounts (one account in US\$ and one in UZS) maintained by the PFIs in the form of credit to finance sub-projects undertaken by the beneficiaries. The beneficiaries will repay the received credit to two revolving accounts maintained by each PFI, one in UZS and one is US\$. Each PFI pay interest to MOF and will repay the received incremental credit within 20 years to MOF. Transfers to the Rural Guarantee Facility (RGF) are expected to be made using the direct payment method to a separate account

maintained in USD in a commercial bank and the IFAD funds will not be mingled with other funds. A flow of funds chart is presented in Appendix 7.

160. **Conditions for disbursement.** The following conditions related to financial management are to be met before the first withdrawal can be realized:

- Govt. Resolution appointing the RRA to manage the Project.
- Key Staff including the PMU Manager, the chief accountant, and the procurement specialist have been duly appointed;
- A Project Implementation Manual including the Financial Administration and Accounting manual, has been approved by IFAD;
- The IFAD no-objection on the first AWPB and procurement plan for the first 18 months of the Project has been obtained.
- IFAD has received from the Minister of Finance, – a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s);
- IFAD has received documentation evidencing the opening of (i) designated accounts to receive IFAD Loan and Grant proceeds; and (ii) the operating accounts to receive funds from the designated account with advice of the persons/titles authorized to operate these accounts.

161. In addition to the general conditions for first withdrawal listed above, the following specific conditions for first withdrawal will apply. No funds will be transferred to the PFIs before the following conditions have been fulfilled:

- First three Value Chain Development Plans have been prepared and received IFAD's no-objection.
- The Investment Guidelines (or equivalent) for credit including the operating modalities including the eligibility criteria for the PFI and beneficiaries by credit window (agricultural diversification and modernization window or youth window) have been approved by IFAD.
- The Subsidiary Loan agreement (SLA) for providing credit to PFI has been approved by IFAD.
- The PFI has opened an incremental account to receive IFAD loan funds and a revolving account for credit reflows.

162. No funds will be transferred to the Rural Guarantee Facility (RGF) before the following conditions have been fulfilled:

- RGF has become fully operational and due diligence assessment including an assessment of its FM capacity has been conducted and has been deemed satisfactory to IFAD
- The investment guidelines (or equivalent) and operating modalities including the eligibility criteria for RGF have received IFAD's no-objection.
- The RGF agreement, specifying all the necessary modalities, between the RRA (or other entity as agreed with IFAD) and the entity managing RGF has been duly formalized and received IFAD's no-objection.
- A separate account for RGF has been duly opened.
- The template for RGF sub agreement for providing guarantees to financial institution/smallholder/rural business have received IFAD's no-objection.

163. **Counterpart contributions.** Counterpart funds will be essentially provided by way of tax exemption as has been done for the on-going projects so far.

164. **Internal controls and internal audit.** The internal control system in place within the RRA conforms to the Government system and has been deemed acceptable by IFAD. The existing internal control will be further complemented by Project specific controls. Currently, there is no internal audit unit at the PMU level. However, the projects are subject to internal review by the Accounting Chamber

and by the Revision Commission of the MOF. In order to avoid the risk of over-auditing, during implementation and based on IFAD recommendations, the PMU may hire an internal auditor to review the operational controls for the three projects funded by IFAD (HSP, DVCDP, ADMP), in particular over rural finance components.

165. **Audit Arrangements.** The RRA will contract an independent audit firm to audit the Project in accordance with International Standards on Auditing (ISA) and IFAD guidelines on project audits. The terms of reference for the audit will be agreed with IFAD on annual basis. The consolidated audit report will be submitted to IFAD within six months of the end of the fiscal year. As part of the annual audit the auditors are required to audit the Project transfers and expenditures incurred under RGF. In this respect the investing entity and/or RGF shall make available to the Project auditors all necessary financial information related to the use of Project funds. In addition, an operational audit of RGF will be conducted after 3 years of operation by the RRA PMU staff as well as external credit guarantee specialists as required

166. **Procurement.** As part of the detailed design for the ADMP, IFAD assessed the public procurement systems and procuring institutions available in Uzbekistan for purposes of identifying an entity that would handle procurement under the ADMP. References are made to the pre-existing World Bank's Country Procurement Assessment Report (CPAR) of 2003, an in-depth review of the capacities of the public procurement systems, the World Bank's Country Integrated Fiduciary Assessment (CIFA) of 2012, as well as the 2013 PEFA, which includes an updated assessment of the public procurement system. While the government has introduced various public procurement reforms through various decrees and resolutions, serious challenges remain.

167. Therefore, despite some recent developments to modernize and strengthen Uzbekistan's public procurement system there are currently critical gaps in compatibility with IFAD's applicable Procurement Guidelines and procedures. However, the capacity of the RRA to conduct procurement was found to be in compliance with IFAD procurement regulations and procedures. In view of the above, the Project will adopt the IFAD Procurement Guidelines. Details, including the first 18-month Procurement Plan, are provided in Appendix 8.

168. **Governance.** The Project's design incorporates various measures to assure good governance as indicated by overall operational accountability and transparency; financial management; procurement of goods and services; environmental governance; gender equality and mechanisms for complaints and remedies. These include: (i) the terms and conditions of SLAs; (ii) consistent stakeholder representation in the Project's planning, M&E/ KM and impact assessment cycle, affording mechanisms for complaints and remedies; (iii) fair participation of women beneficiaries in all activities and levels of the Project; (iv) social, environmental and climate change safeguards and guidelines detailed in the Project Implementation Manual (PIM); (v) application of guidelines and procedures for procurement consistent with the current IFAD Procurement Guidelines; (vi) close supervision and implementation support by IFAD, including risk-based financial management supervision and operational reviews; and (vii) provision for regular external audit.

## F. Supervision

169. **Supervision and implementation support.** A supervision plan covering the period up until MTR will be agreed at Project start-up. The ADMP will be supervised directly by IFAD. IFAD supervision would include **risk-based financial management supervisions**, and also **Operational Reviews** covering a random sample of Project activities, to be carried out in Project Years (PYs) 2 and 4 by independent auditors and under TOR acceptable to IFAD. Details of the financial management supervision are provided in Appendix 7. The timely completion of a baseline survey according with the Project's outcome/output indicators is fundamental to effective Project supervision.



## G. Risk identification and mitigation

170. Key Project implementation **assumptions** are that the country's economy maintains its stability, and that consistency is established between the stated government policies and rural economic reforms supporting the agriculture sector diversification and modernization as well as the private sector and smallholder farmers *vis-à-vis* the actual implementation of these policies and reforms.

171. **Distortive policy environment**, whereby interventions are not consistent with effective targeting of the agreed beneficiaries, leading to the possibility of elite capture. Mitigating measures include detailing explicit actions in the Project Implementation Manual (PIM) to ensure correct targeting of benefits as well as conducting regular IFAD supervision missions to monitor the progress and reinforce the implementation of criteria for effective targeting.

172. **Participation**. The main risk relates to potential failure in correctly aligning the incentives for the various actors, farmers, companies and FSPs/PFIs expected to participate in the Project. Mitigating measures include an in-depth, participatory analysis of production/ business opportunities, input and other constraints, and actual financial risks, based on formulated bankable business plans. Mitigation in this regard also involves a widespread informational campaign to reach out to all potential partners and formulate inclusive VCDPs, meaning that smallholder farmers – and in particular *dekhans* – receive better profits from their production and gradually change their behaviour towards loyal suppliers of raw material.

173. **Market prospects**. All value chains face market and commercial risks from price fluctuations and competition from imports and other domestic agri-business enterprises. The products targeted for the Project support will be the ones with strong current and future demand on domestic and export markets. Value chain participants will receive training on how to position their products in these markets in order to maximize the returns in the face of strong competition, diversify their production base in order to withstand price fluctuations, and interpret market information.

174. **Contracts**. The risk exists that contractual obligations, e.g., for product delivery to collection points, will not be fully observed and that informal/formal contracts will break down. Remedial measures will include the establishment of proper contracts, training on business management, and regular monitoring by the Project management.

175. **Deterioration of financial performance** of participating banks due to the implementation of directed subsidized government programmes. This risk will be monitored through annual checking of banks against the minimum eligibility criteria; in case of non-compliance, new disbursements to banks will be suspended, and in case of non-compliance for two consecutive periods, SLAs with these banks will be cancelled.

176. **Outbreak of a notifiable transboundary animal disease** could adversely affect the ADMP value chains through decreased productivity of affected farms and, in time, bans on official export of livestock products. The highest risks come from outbreaks of foot and mouth disease, PPR or a pox virus disease in sheep or goats. Mitigating animal disease epidemic risk includes: (i) initiating the FAO-OIE Global Strategy for Control and Eradication of PPR by the State Veterinary Department; (ii) upgrading critical competencies specifically for active disease surveillance and reporting from the field; and (iii) veterinary field staff capable of funneling information and specimens into the Government's veterinary disease diagnostic laboratories.

## IV. Project costs, financing, benefits and sustainability

### A. Project costs

177. The main assumptions underlying the derivation of Project costs, estimated Project costs and financing plan are:

- The Project costs are based on September 2017 prices.
- The proposed Project will be financed over a six-year period.

- **Inflation.** The official annual inflation rate of 5.7 per cent is taken as constant for the duration of the Project period 2018-2023. The international inflation rate is set at 2.0 per cent per year, in line with medium to long term projections of EIU and the World Bank group (Commodity Market Outlook, Jan 2017) for the US\$.
- **Exchange Rate.** Further to the devaluation of the UZS on 5<sup>th</sup> September 2017, the Base Exchange rate for this analysis has been set at UZS 8,092 to US\$1 as the official exchange rate prevailing at the end of the final design mission.
- The Project costs are presented in both UZS and US\$. Conversions from current US\$ values into UZS use constant purchasing power exchange rates.
- **Taxes and Duties.** There is VAT of 20 per cent levied on all imported and locally procured goods and services. For directly recruited local staff the Project would cover the social insurance of 25 per cent.

178. The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 157.0 million (UZS 1,255 billion). Physical and price contingencies are low at 1 per cent of the total Project costs. This is mostly due to the fact that investments associated with the rural finance (lumpsum with no contingency) make up about 85 per cent of the total Project costs. The foreign exchange component is estimated at US\$ 109.0 million, about 69 per cent of the total Project costs. Taxes and duties make up approximately US\$ 24.5 million. The Project management cost makes about 1.4 per cent of the total Project costs (US\$ 2.1 million). Table 1 summarizes the Project costs by components.

179. The summary and detailed cost tables are presented in Appendix 9 and in Working Paper 2.

**Table 1: Project Costs by Components**

	(US\$ '000)			%	% Total
	Local	Foreign	Total	Foreign Exchange	Base Costs
<b>1. Inclusive Value Chains Development</b>					
1.1 Enabling business env. for inclusive VC	303	155	457	34	-
1.2 CD for VC Stakeholders	5,848	5,366	11,214	48	7
<b>Subtotal 1. Inclusive Value Chains Development</b>	<b>6,151</b>	<b>5,521</b>	<b>11,671</b>	<b>47</b>	<b>8</b>
<b>2. Inclusive Rural Finance</b>					
2.1 Rural guarantee facility	5,982	4,017	9,999	40	6
2.2 ADM Credit lines	22,754	89,737	112,491	80	72
2.3 Credit line for youth	7,200	4,800	12,000	40	8
<b>Subtotal 2. Inclusive Rural Finance</b>	<b>35,936</b>	<b>98,554</b>	<b>134,490</b>	<b>73</b>	<b>86</b>
<b>3. Climate-Resilient Rural Infrastructure</b>					
3.1 Modernization of irrigation systems	3,396	3,946	7,342	54	5
3.2 Increasing capacities of WUAs	67	29	95	30	-
<b>Subtotal 3. Climate-Resilient Rural Infrastructure</b>	<b>3,462</b>	<b>3,975</b>	<b>7,437</b>	<b>53</b>	<b>5</b>
<b>4. Project management</b>					
4.1 Project Management Unit	1,027	153	1,180	13	1
4.2 Project Implementation Team	679	115	794	15	1
<b>Subtotal 4. Project management</b>	<b>1,705</b>	<b>268</b>	<b>1,974</b>	<b>14</b>	<b>1</b>
<b>Total BASELINE COSTS</b>	<b>47,255</b>	<b>108,317</b>	<b>155,572</b>	<b>70</b>	<b>100</b>
Physical Contingencies	153	195	348	56	-
Price Contingencies	582	482	1,065	45	1
<b>Total PROJECT COSTS</b>	<b>47,990</b>	<b>108,994</b>	<b>156,984</b>	<b>69</b>	<b>101</b>

## B. Project financing

180. The Project will be financed through multiple sources, including IFAD loan, IFAD grant, Government, Beneficiaries and Participating Financial Institutions (PFI):

- (a) **IFAD loan (current PBAS - 2016-2018):** for an amount of US\$ 46.2 million, the loan will cover 30 per cent of the Project, contributing to: 50 per cent of the Inclusive Value Chains Development Component (Component 1, amounting to US\$ 7.9 million); 26 per cent of the Inclusive Rural Finance component (Component 2, amounting to US\$ 134.5 million);

42 per cent of the Climate-resilient Rural Infrastructure Component (Component 3, amounting to US\$ 7.9 million), and 64 per cent of the Project Management Component (Component 4, amounting to US\$ 2.1 million).

- (b) **The Financing gap** of US\$ 47 million insert amount may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation. The gap represents 30 per cent of the ADMP costs, notably: 31 per cent of Component 1; 30 per cent of Component 2; 41 per cent of Component 3; and 21 per cent of Component 4.
- (c) **IFAD grant (under current PBAS)**: an amount of US\$ 0.3 million corresponding to about 0.2 per cent of the project cost will cover part of the international technical assistance and trainings under component 1 (for 1.7 per cent of the cost) and technical assistance to MAWR under component 2 (for 0.1 per cent of the cost).
- (d) **Government**: in the form of taxes, the Government will waive all taxes related to project expenditures, including all those associated to goods and services procured under the loans generated by the project's funded credit lines, and social fund associated to personnel. Taxes represent about 16 per cent of the cost, for an amount of US\$ 24.4 million.
- (e) **The Participating Financial Institutions (PFIs)**: a contribution of about US\$ 19.6 million is expected to match the funds made available by the project.
- (f) **Beneficiaries** would contribute by at least US\$ 19.5 million, corresponding to their 20 per cent contribution to the credit lines.

181. The Government contribution would cover all taxes and duties on all Project inputs that involve funding from the IFAD Loan and Grant or any other external source of funding associated with the IFAD Loan and Grant. The estimate of taxes and duties is based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan and Grant, any future changes in the rates and/or structures of taxes and duties would have to apply to the Project.

182. Table 2 provides a summary of the Project financing plan by components. Table 3 shows the Financing Plan by expenditure categories.

**Table 2: Financing Plan by Components (US\$'000)**

	IFAD Grant		IFAD Grant II		IFAD Loan I		IFAD Loan II		GOU		PFI		Beneficiaries		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>1. Inclusive Value Chains Development</b>																
1.1 Enabling business env. for inclusive VC	106	23.2	176	38.5	56	12.2	43	9.4	76	16.7	-	-	-	-	457	0.3
1.2 CD for VC Stakeholders	101	0.8	230	1.9	6,204	52.0	3,399	28.5	1,992	16.7	-	-	15	0.1	11,941	7.6
<b>Subtotal 1. Inclusive Value Chains Develop</b>	<b>207</b>	<b>1.7</b>	<b>406</b>	<b>3.3</b>	<b>6,260</b>	<b>50.5</b>	<b>3,442</b>	<b>27.8</b>	<b>2,068</b>	<b>16.7</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>0.1</b>	<b>12,398</b>	<b>7.9</b>
<b>2. Inclusive Rural Finance</b>																
2.1 Rural guarantee facility	-	-	-	-	3,054	30.5	6,935	69.3	11	0.1	-	-	-	-	10,000	6.4
2.2 ADM Credit lines	93	0.1	94	0.1	27,196	24.2	27,363	24.3	18,750	16.7	19,543	17.4	19,458	17.3	112,498	71.7
2.3 Credit line for youth	-	-	-	-	5,000	41.7	5,000	41.7	2,000	16.7	-	-	-	-	12,000	7.6
<b>Subtotal 2. Inclusive Rural Finance</b>	<b>93</b>	<b>0.1</b>	<b>94</b>	<b>0.1</b>	<b>35,250</b>	<b>26.2</b>	<b>39,298</b>	<b>29.2</b>	<b>20,761</b>	<b>15.4</b>	<b>19,543</b>	<b>14.5</b>	<b>19,458</b>	<b>14.5</b>	<b>134,498</b>	<b>85.7</b>
<b>3. Climate-Resilient Rural Infrastructure</b>																
3.1 Modernization of irrigation systems	-	-	-	-	3,292	41.9	3,260	41.5	1,310	16.7	-	-	-	-	7,862	5.0
3.2 Increasing capacities of WUAs	-	-	-	-	37	37.3	46	46.0	17	16.7	-	-	-	-	100	0.1
<b>Subtotal 3. Climate-Resilient Rural Infrastru</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,329</b>	<b>41.8</b>	<b>3,305</b>	<b>41.5</b>	<b>1,327</b>	<b>16.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7,961</b>	<b>5.1</b>
<b>4. Project management</b>																
4.1 Project Management Unit	-	-	-	-	800	62.9	275	21.6	198	15.5	-	-	-	-	1,273	0.8
4.2 Project Implementation Team	-	-	-	-	560	65.7	179	21.0	114	13.4	-	-	-	-	853	0.5
<b>Subtotal 4. Project management</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,361</b>	<b>64.0</b>	<b>454</b>	<b>21.4</b>	<b>312</b>	<b>14.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,126</b>	<b>1.4</b>
<b>Total PROJECT COSTS</b>	<b>300</b>	<b>0.2</b>	<b>500</b>	<b>0.3</b>	<b>46,200</b>	<b>29.4</b>	<b>46,500</b>	<b>29.6</b>	<b>24,468</b>	<b>15.6</b>	<b>19,543</b>	<b>12.4</b>	<b>19,473</b>	<b>12.4</b>	<b>156,984</b>	<b>100.0</b>

**Table 3: Financing Plan by Expenditure Accounts (US\$ '000)**

	IFAD Grant		IFAD Grant II		IFAD Loan I		IFAD Loan II		GOU		PFI		Beneficiaries		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>I. Investment Costs</b>																
A. Equipment and goods	-	-	-	-	3,652	53.2	2,054	29.9	1,144	16.7	-	-	15	0.2	6,866	4.4
B. Civil Works	-	-	-	-	3,596	44.1	3,192	39.2	1,358	16.7	-	-	-	-	8,147	5.2
C. Vehicles	-	-	-	-	99	75.0	-	-	33	25.0	-	-	-	-	132	0.1
<b>D. Technical Assistance and Studies</b>																
International Technical Assistance	46	3.5	46	3.5	741	56.7	257	19.6	218	16.7	-	-	-	-	1,307	0.8
National Technical Assistance	254	6.6	454	11.8	1,428	37.2	980	25.5	640	16.7	85	2.2	-	-	3,841	2.4
<b>Subtotal Technical Assistance and Studies</b>	<b>300</b>	<b>5.8</b>	<b>500</b>	<b>9.7</b>	<b>2,169</b>	<b>42.1</b>	<b>1,236</b>	<b>24.0</b>	<b>858</b>	<b>16.7</b>	<b>85</b>	<b>1.7</b>	<b>-</b>	<b>-</b>	<b>5,148</b>	<b>3.3</b>
E. Training and Workshops	-	-	-	-	466	49.5	319	33.8	157	16.7	-	-	-	-	942	0.6
<b>F. Inclusive VC Finance</b>																
1. Guarantee Finance	-	-	-	-	3,000	30.2	6,935	69.8	-	-	-	-	-	-	9,935	6.3
2. Credit line for AMD	-	-	-	-	27,129	24.2	27,363	24.4	18,682	16.7	19,458	17.4	19,458	17.4	112,091	71.4
3. Credit line for Youth	-	-	-	-	5,000	41.7	5,000	41.7	2,000	16.7	-	-	-	-	12,000	7.6
<b>Subtotal Inclusive VC Finance</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>35,129</b>	<b>26.2</b>	<b>39,298</b>	<b>29.3</b>	<b>20,682</b>	<b>15.4</b>	<b>19,458</b>	<b>14.5</b>	<b>19,458</b>	<b>14.5</b>	<b>134,026</b>	<b>85.4</b>
<b>Total Investment Costs</b>	<b>300</b>	<b>0.2</b>	<b>500</b>	<b>0.3</b>	<b>45,112</b>	<b>29.1</b>	<b>46,100</b>	<b>29.7</b>	<b>24,232</b>	<b>15.6</b>	<b>19,543</b>	<b>12.6</b>	<b>19,473</b>	<b>12.5</b>	<b>155,261</b>	<b>98.9</b>
<b>II. Recurrent Costs</b>																
A. Salaries /a	-	-	-	-	719	73.2	263	26.8	-	-	-	-	-	-	982	0.6
B. Operation and Maintenance	-	-	-	-	122	60.3	47	23.0	34	16.7	-	-	-	-	203	0.1
C. Other Operating Costs	-	-	-	-	247	45.9	90	16.7	202	37.4	-	-	-	-	539	0.3
<b>Total Recurrent Costs</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,089</b>	<b>63.2</b>	<b>400</b>	<b>23.2</b>	<b>235</b>	<b>13.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,724</b>	<b>1.1</b>
<b>Total PROJECT COSTS</b>	<b>300</b>	<b>0.2</b>	<b>500</b>	<b>0.3</b>	<b>46,200</b>	<b>29.4</b>	<b>46,500</b>	<b>29.6</b>	<b>24,468</b>	<b>15.6</b>	<b>19,543</b>	<b>12.4</b>	<b>19,473</b>	<b>12.4</b>	<b>156,984</b>	<b>100.0</b>

## C. Summary benefits and economic analysis

### Expected results and benefits

183. The Project is expected to lead to increased income of households farmers, *dekhan* farmers, commercial farmers, agri-firms and rural entrepreneurs. Benefits would accrue from: (i) increased farm and herd productivity and reduction of production costs due to the adoption of modern technologies; (ii) reduced losses during harvesting; (iii) a subsequent increased proportion of marketed farm produce; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs and in increased sales and net margins; (v) increased farm income through diversification from wheat and cotton production; (vi) increased employment opportunities, either for hired or family labour, for both on-farm and off-farm activities; (vii) increased trade (export) and improved balance of payments; and (viii) increased revenues for the government as a result of increased volume of taxable production. Principal increases in incomes would be largely dependent on farmers/household/rural entrepreneurs accessing dedicated credit lines from PFIs, benefiting of capacity development interventions from the Project (including demonstrations) as well as from participating LEs, adopting efficient techniques and technologies (including in irrigation) promoted by the Project. This will generally contribute to create a favourable economic environment in Fergana Valley, encouraging farmers/rural entrepreneurs to produce more competitive products and establish stronger commercial linkages.

184. The indicative economic activities selected for the analysis correspond to the ones with highest adoption potential by the value chain stakeholders in the project area in the on-going phase of diversification from the prevailing wheat and cotton production. The economic and financial analysis (Appendix 10) summarizes the results of a number of representative economic activities. These include the following: (a) a first set represents the crop production, and includes open field vegetable production, apple and grapes production. All incremental benefits have been estimated in comparison with wheat production; (b) a second set represents three livestock products, including small ruminants, aquaculture (extensive and indoor), and rabbit breeding (as an emerging profitable trend). Incremental benefits in this case are measured compared to smaller herds (for small ruminant, rabbit breeding, and indoor intensive aquaculture) and to wheat production for extensive catfish production; (c) a third set models the benefit streams generated by rural entrepreneurs operating in the above value chains, comprising small scale slaughter house and warehouses with packaging units; (d) a fourth set includes few models that represent the possible economic activities undertaken by youth (women and men) as fruit of the dedicated credit lines. These include vegetable production in backyard greenhouses (compared to open field vegetable production), and beekeeping (as fully incremental activity). The specific analysis of youth credit lines will take into account also small scale sheep/goat rearing and intensive aquaculture. All these activities are more attractive to youth due to

the limited capital, collateral, or land required for the investment; (e) a fifth set illustrates the benefits of widespread dissemination of drip irrigation technologies; (f) finally, the analysis presents two models showing the benefits of minimum/no-tillage and conservation agriculture technologies as possible results. The above sets of models were used as building blocks for the economic evaluation of the entire Project once aggregated for the target stakeholders. All the technical assumptions within the models have been elaborated jointly with the design team members and on the basis of field surveys, national statistics, international and national expert consultation.

185. The main result of the financial analysis include: (i) a significant increase in gross and net returns from each model compared with and without-project situation: (ii) sufficient benefit/cost ratios illustrating the worthiness of the investments. The respective NPVs range from US\$ 425 to US\$ 41,892, while, the IRRs from 15 per cent to 76 per cent, which are comparable to those estimated for similar operations in neighbouring Kyrgyzstan, Tajikistan and South Kazakhstan. The aggregated incremental benefits deriving from ADMP related investment are summarized in Table 4 and detailed in Appendix 10.

186. **Household impact.** From food security, economic inclusiveness and risk mitigation perspectives, the increased volumes, more reliable and higher-quality crop and livestock production will reduce the dilemma now faced by smallholder farmers of: either selling products or consuming them at household level. The Project will facilitate the security of both: increased year-round cash income and stable family consumption. The large number of incremental full-time equivalent job created within the value chains and the incremental number of suppliers expected to be generated by the Project's interventions will directly address firstly the access dimension of food security, and is expected to have a significant impact on household income. In addition to supporting women farmers and managers in production, the Project will also move them further up the value chains by engaging them in processing, management, marketing and ownership.

**Table 4. Summary of ADMP benefits**

Sub-component / activities	Costs (m US\$)	Main results	Main beneficiaries	Outreach	Main benefits
<b>1.1: Enabling Business Environment for Inclusive Value Chains</b>	0.5 m US\$	Value Chain mapping and market assessments to support LEs in preparing their Roadmaps	LE rep.	At least 1,200 LE representatives (30% women)	1,200 Roadmaps prepared
<b>1.2: Capacity Development for Value Chain Stakeholders</b>	12.0 m US\$	Trainings, study tours, other forms of capacity development delivered to key VC stakeholders	LE rep., producers, vets, government officials...	About 10,000 individuals (30% women)	Value chains stakeholders' capacities strengthened
<b>2.1: Rural Guarantee Facility (RGF)</b>	10.0 m US\$	RGF funds increased and LEs would access to guaranteed credit	Agricultural Producers and Value chain actors	About 2,400 additional LEs would access to guaranteed credit	49.5 m US\$ worth loans mobilized for agrifood sector <sup>41</sup>
<b>2.2: Credit lines for agriculture diversification and modernization</b>	112.5 m US\$	Increased access to credit and increased backward and forward linkages within the selected value chains	LE rep., suppliers, VC actors, rural workers	About 54,000 incremental suppliers (of which 40% women) including 30,000 smallholders / dekhan farmers and about 10,000 full time equivalent incremental jobs created	Commercial partnerships established within the VC and incremental employment generated
<b>2.3: Special credit window for youth</b>	12.0 m US\$	Youth with limited access to financial services in selected VC access financial services to start up their businesses	Youth with limited access to financial services	1,000 youth (50% women)	

<sup>41</sup> Not quantified in the project's EFA.

Sub-component / activities	Costs (m US\$)	Main results	Main beneficiaries	Outreach	Main benefits
<b>3.1. Modernization of irrigation systems</b>	7.9 m US\$	Enhanced access by smallholder farmers to modernized irrigation systems	Dehkan farmers	About 1,000 producers for a 3,500 ha surface	
<b>3.2. Increasing capacities of WCAs and BAIS divisions to operate modernized irrigation systems</b>	0.9 m US\$	Trainings and capacity development to Water Consumers Associations (WCA) representatives	WCA rep.	About 100	WCA with stronger capacities

### Economic justification

187. The economic analysis of the overall Project indicates that the gains of the total investments, under the ADMP, are significant and robust in economic terms. The analysis results in an internal **economic rate of return of 16.5 per cent** and a **NPV of US\$ 34.4 million** taken over 20 years with the benefit stream based on the quantifiable benefits that relate directly to the activities undertaken by the Project.

188. **Sensitivity Analysis.** Sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits. A fall in total Project benefits by 20 per cent and an increase in total Project costs by the same proportion would reduce the base IRR to about 10 per cent. With the instability of prices expected as consequence of the recently established free fluctuation of the UZS, the sensitivity analysis shows how particularly important is the timely implementation, to ensure early realization of benefits.

189. The switching value for total Project benefits is about 27 per cent; while for Project costs it is approximately 37 per cent. A one-year delay in Project benefits reduces the IRR to 15.0 per cent. With a two-year delay in Project benefits, the project has negative economic returns, with an IRR of approximately 13.6 per cent.

### Sustainability

190. The sustainability of the Project's results is, inter alia, based on: (i) the VC champion business and technical capacity building activities to be promoted; (ii) the demand-driven nature of the intervention; and (iii) the preparation of VCDPs as the basis for all investment which should lead to inclusive and more equitable and profitable VCs.

### Exit strategy

191. The Project's sustainability is also based on: an exit strategy that comprises: (i) ensuring the ownership by users-beneficiaries of the financed activities; (ii) the participatory development of demand-driven technology; (iii) integration along VCs including input suppliers and service providers; and (iv) limited project operational, staff, and recurrent costs.

192. For the public goods of the ADMP (Sub-component 1.2), the skills and investments in the Plant Quarantine, Certification labs and Vet clinics make the public services more robust, advancing toward meeting international standards and recognized equivalence with trading partners. The enhanced competence, understanding and use of the SPS Agreement will serve the Government well in promoting higher-value products trade and in defending Uzbek consumers and industries from import of unsafe products, thus increasing the country's export earnings and food safety. After the Project ends, the Government will need to maintain sufficient funding for continued investments and running costs. Some of these expenditures could be covered through user-fees from producers (vaccinations) and processors (export certification) as well as handing over goods procured under demonstrations to host farmers possibly on a partially reimbursed approach.

## Scaling-up

193. The Project takes a pilot approach to the development of efficient, sustainable VC development in Uzbekistan, including the field testing of innovative technology (modernizing Zoo-Vet centres and irrigation schemes, introducing zero/minimum till and agro-meteorological stations) and developing new financial products (Rural Guarantee Facility, credit lines with built-in TA, encouraging the banks to act as agents delivering business development advice to borrowers) and associated capacity building of supporting institutions. The experiences so derived will be scaled up/replicated in other parts of the country where similar VCs exist. This also involves major potential for scaling up and synergies in relation to subsequent donor Projects.

194. The Project will capitalise on the ongoing HSP and DVCDP. By increasing capacities of service providers (public and private) and scaling up the inclusive value chain model as well as supporting smallholder farmers and their groups will open up the **institutional space** for a larger number of smallholder farmers to benefit from economies of scale to take the market place for the long-term profitable sustainability of smallholder agriculture in Uzbekistan. The Project will pursue the expansion of **fiscal space** by exploring the possibilities for collaboration with ADB, the World Bank and the EU in support of VC development. The ADMP is highly consistent with the Government's key priorities as expressed in the Welfare Improvement Strategy of the Republic of Uzbekistan for 2013-2015 (WIS II) and the Presidential Decree No.2460 on agriculture sector reforms and development for 2016-2020. The **main drivers** for scaling up these elements under the ADMP are: (a) high import substitution opportunities which provide smallholders an opportunity to compete in; (b) an eagerness of smallholder *dekhan* farmers to profitably engage in crop/livestock enterprises; and (c) a solid commitment of the GOU to diversify and modernise the agriculture sector (gradually shift from cotton and wheat to more value added commodities as well as introduction of resource-saving technologies).

195. Within the Project, publications will be commissioned to inform the Project stakeholders, Government and donor community of the Project's successes that can be used for further forging of partnerships and resource mobilization.





## Appendix 1: Country and rural context background

### A. Country and rural development context

#### Country economic situation

1. The Republic of Uzbekistan is a land-locked, lower middle-income with a GDP per capita in 2015 of US\$2,130, and a large share of its total population of 31.8 million (2016) living in rural communities (around 60 per cent) and engaged directly in agriculture-related activities (approximately 40 per cent). Agriculture provides around 25 per cent of the country's employment, and its share of the Gross Domestic Product (GDP) is estimated at 17.6 per cent (2014), reflecting proportional changes that result from government efforts to expand the industrial and services sectors. The country's GDP growth over the next two years is estimated to average 7.2 per cent (WB – Country Partnership Framework 2016-2020 – see Table 1 and Figure 1), slightly lower for the agriculture sector (6.5 per cent), but still significant. The overall growth is projected to continue at 5.3 per cent in 2019-21, helped by a pick-up in global commodity prices in 2020-21 and rising gas export volumes (EIU – Country Report, April 2017).

**Table 1. Selected Economic Indicators and Baseline Projections for 2016-18**

<i>In percent change, unless otherwise indicated<sup>42</sup></i>	2013	2014	2015p	2016*	2017*	2018*
GDP, at constant market prices	8	8.1	8	7.3	7.2	7.2
Private Consumption	4.8	5.8	-0.5	-0.3	3.5	5
Government Consumption	5.9	9.9	8.4	3.1	2	2.9
Gross Fixed Capital Investment	10.7	9.6	9.5	9.3	9.4	10
Exports, Goods, and Services	8.3	-5.1	-5.3	-2.8	0.2	2.6
Imports, Goods, and Services	5.9	-4.1	-13.4	-6.9	-5.3	1.1
GDP, at constant factor prices	9.4	8	9	7.5	7.2	7.2
Agriculture	6.8	6.9	6.8	6.6	6.5	6.5
Industry	6	5.7	5.8	4.5	4	4.2
Services	12	9.3	11.1	8.9	8.4	8.4
Inflation (Household Consumption Deflator)	10.2	10	10	9	8	8
Inflation (Consumer Price Index, official)	6.8	6.1	5.6	5.5	...	...
Current Account Balance, % of GDP	2.9	1.7	0.9	0.8	0.9	1
Fiscal Balance, % of GDP	2.5	2	0.4	0.3	0.6	0.7

Source: Government of Uzbekistan National Statistics and World Bank staff calculations for 2013-15, and World Bank forecasts for 2016-18.

2. Uzbekistan is relatively self-sufficient in terms of food production and food trade balance, and the State controls wheat production to ensure food security. Food imports meet the country's growing demand and the increased disposable income/ purchasing capacity of the population, which is increasingly applied to higher value goods, particularly meat and dairy products. In 2015, Uzbekistan's agricultural imports were 11.5 per cent (US\$ 1.3 billion) of the country's total imports (EIU).

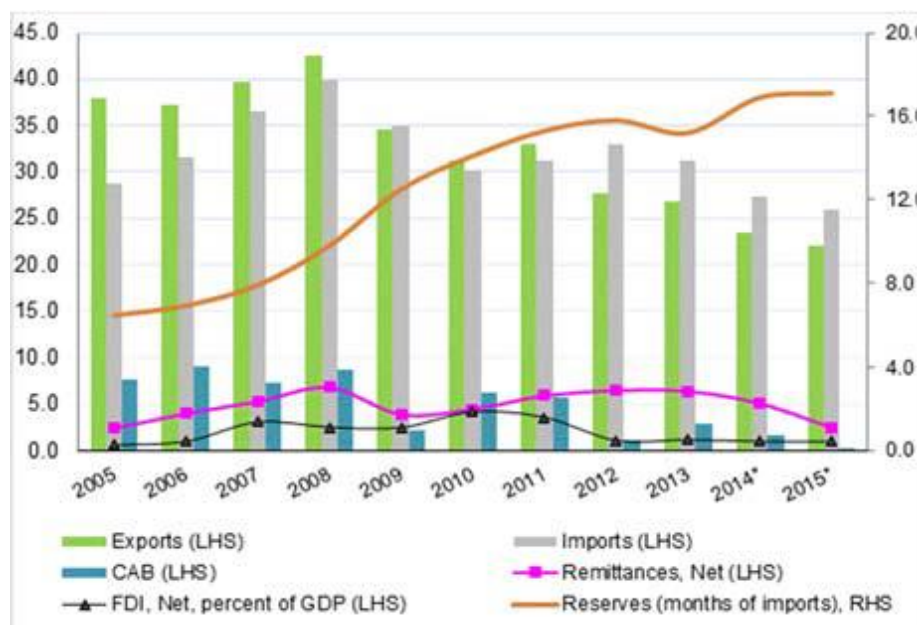
3. Cotton and grains are the main crops in Uzbekistan, while horticultural products, fruits, vegetables and livestock production are important sources of income for rural families. Livestock alone contributes about 40 per cent of the Gross Agricultural Output (GAO). According to government statistics, the country produced US\$ 12.9 billion, of agricultural products in 2013, of which US\$ 7.7 billion was crop production, and US\$ 5.2 billion was livestock and poultry production. Common characteristics for both the horticultural and livestock sub-sectors are that the main actors

<sup>42</sup> Notes: p-preliminary or expected growth of GDP, investment, export, import, agriculture, industry, and the current account balance figures are official preliminary estimates, the rest is Bank staff calculations); \* -The years 2016-18 are projections based on official primary figures for the base year (2015).

and producers are small-scale semi-commercial private farms and the smallholder *dehkan*, family homesteads. The current land tenure and allocation structure is the result of the implementation of land distribution and privatization initiatives following the restructuring of large collective and state farms.

4. The Government aimed for annual growth of the agrarian sector of 5.4 per cent in the period of 2013-2015, and for this growth emphasis to be continued. There is a specific aim of diversifying from wheat and cotton production towards higher value intensive crops on a total of 220,000 ha in the next five years. *Dekhans* farmers are prominently included in plans for intensification of production systems. It is also planned to increase the prominence of Uzbek industries involved in processing horticultural, meat and dairy products. There are opportunities both in export and domestic markets. The growth in export of horticultural products is already well documented<sup>43</sup>, and is well supported by private and public investment. According to import statistics, there are major opportunities for import substitution for wheat and wheat products, barley, edible oils and sugar, which are predominantly produced by large scale private farms. There are also significant opportunities for *dekhans* for production of meat, dairy, freshwater fish and various horticultural products, including potato, to satisfy local demand. There are currently annual imports of meat valued at US\$ 69 million, poultry products at US\$ 43 million, fish at US\$ 7.1 million and pistachio at US\$ 7.8 million. All of these products could be profitably produced, but this would require major improvements in the application technology employed for irrigation systems, to ensure high water-use efficiency and low risk of salinity and erosion. Uzbekistan is also an importer of planting seeds and nursery seedlings. These could be multiplied locally if proper supervision was provided by the owners/distributors of the plant breeders' rights. There are five areas where targeted investment would yield substantial improvements: i) improvement of irrigation water use efficiency; ii) rehabilitation of land degraded through salinity and soil erosion; iii) appropriate mechanisation to improve productivity; iv) application of modern conservation agriculture techniques; and v) investment in the knowledge and capacity of farmers and farm employees to better apply improved techniques and business principles.

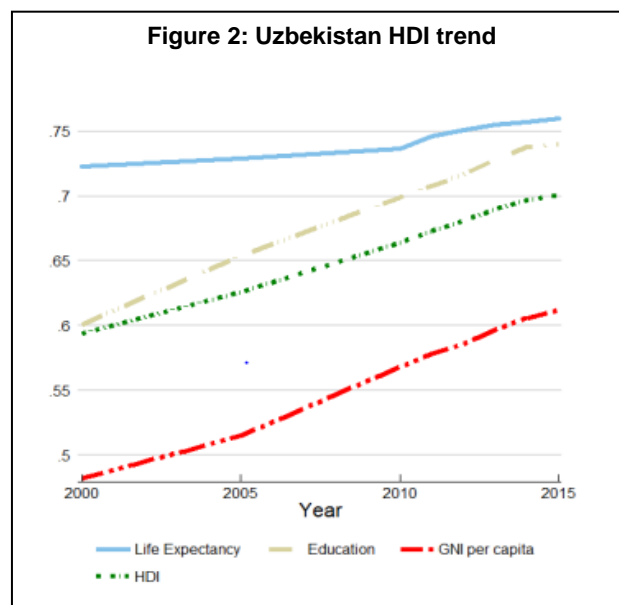
**Figure 1: External Sector Indicators, 2005–15 (% GDP). Source: WB**



<sup>43</sup> USAID, September 2016, Agricultural Value Chain Project, Uzbekistan.

## Rural development and social context

5. Uzbekistan's Human Development Index value for 2015 is 0.701— putting the country in the high human development category— positioning it at 105 out of 188 countries. This represented a significant increase compared to the period between 2000 and 2015, where the HDI value increased from 0.594 to 0.701 (18.0 per cent). Between 1990 and 2015, Uzbekistan's life expectancy at birth increased by 2.6 years, mean years of schooling increased by 2.9 years and expected years of schooling increased by 0.9 years. Uzbekistan's GNI per capita increased by about 91.5 per cent between 1990 and 2015. Trends in Uzbekistan's HDI component indices from 2005 to 2015 are shown in Figure 2. However, when the value is discounted for inequality, the



HDI falls to 0.590, a loss of 15.8 per cent due to inequality in the distribution of the HDI dimension indices. The average loss due to inequality for high HDI countries is 20.0 per cent and for Europe and Central Asia it is 12.7 per cent. The corresponding percentage of labour force participation is 48.3 per cent for women and 76.2 per cent for men. The average life expectancy in the country has increased to 69 years in 2012, approximating the level of developed countries (WHO). Child and maternal mortality rates have decreased correspondingly. Uzbekistan's adult literacy level of 99.9 per cent is higher than the average for developed countries and gender parity is nearly achieved in primary education. Currently, an estimated 35 per cent of the national budget goes to education expenditures.

6. **Rural poverty.** In 2013, around 14 per cent of Uzbekistan's total population were characterised as poor, based on a unidimensional poverty line established by the government (i.e., the cost of a food basket, based on a minimum food consumption equivalent to 2,100 kilocalories per person per day). Nevertheless, 70 per cent of the country's poor under this measure live in rural areas.

7. The low productivity of agriculture; rural populations being subject to numerous implicit taxes; the high dependency within households (i.e. the small number of working adults relative to total household members); regional divergences (i.e. richer regions growing faster); and the high level of informality of rural labour markets are associated with this poverty. Lack of access to productive assets, infrastructure, energy, land and water, technical and financial services, are among the causes of this limited productivity and poverty, affecting disproportionately rural women and young people. Other vulnerable groups in terms of income poverty include families with many children, people with disabilities, the unemployed, and people with lower levels of education.

8. Factors that place women, especially **rural women**, in disadvantage, include: a relatively low (44 per cent) share of formal employment with a high concentration in low-paid sectors such as health and education; relative dependence on the informal economy and agricultural piecework; limited access to credit and property; the relatively low level of social services provision in rural areas; and increasing cultural conservatism manifested in strengthening trends to early marriage and child-bearing, decreasing engagement with higher education and limited mobility, notwithstanding that women internal migrants are reportedly increasing.

9. **Access to land.** Land is a state property and the land plots that are provided for farming must be strictly used for the identified purposes. Land plots cannot be privatized and cannot be objects of purchases, pledges, gifts, exchanges, and secondary rentals. In practice, secondary rent for a period of up to one year is widely used.

10. Uzbekistan has three types of farms: *dekhan*, private and *shirkat* (state owned). *Dekhan* farms<sup>44</sup>, with 13% of irrigated arable land, produce 63% of gross agricultural output<sup>45</sup>. Private farms produce all of the cotton and most of the wheat, and in recent years, an increasing proportion of some fruit and other products. The freedom for private farms to choose to produce different viable products is being increased, in line with Government policy of diversification.

11. Additional land could be provided from the state reserve and is leased for farming on a competitive basis for a term of up to fifty years, but not less than thirty years. Applications for granting land parcels are reviewed jointly by the District Farmers' Council, the District Council of People's Deputies and the District Hakim (District's Governor). Evaluation is based upon a "grade system" (found in Resolution of the Cabinet of Ministers #476 of 2003).

12. Additional land could be also made available due to "change of land category". Agricultural lands have "quality grades" (e.g. making some "not in use", and eventually being changed to "usable"). Every 5-7 years technical soil analyses (qualitative, quantitative and pricing, based on analyses of soil samples) are made, to see if a land-use category can be changed. District Hakims can change agricultural land into non-agricultural use land, for up to 10 hectares of irrigated lands. (This happens, for example, if the irrigated lands become of low productive value - Cabinet of Ministers Resolution # 54 outlines the requirements that need to be met, and regulates how the Hakim can reallocate land).

13. **Migration and remittances.** Net remittances from migrant workers have helped thousands of families in Uzbekistan to contain poverty in their communities. The number of Uzbek migrants in Russia and Kazakhstan was assessed at about 2 million in 2014, or about 12 per cent of the country's working age population. Net remittances were estimated to be around 6.4 percent of GDP in 2013, and these resources help low income families maintain a minimal standard of living. In US dollar terms, the Sums sent back to Uzbekistan are significant, at about US\$ 6.6 billion in 2013. However, these monetary inflows, which tend to be channelled to support household spending, housing construction and the establishment of small businesses, has decreased by 40 per cent during 2015 due to the recession/ rouble crisis and the decreased construction, wage cuts and labour lay-offs in Russia.

14. **2030 Agenda for Sustainable Development.** The government has manifested its commitment towards the Sustainable Development Goals (SDGs) targets as follow up of the previous Millennium Development Goals (MDGs). In 2015, the country was well on its way to achieving the national MDG1 target of halving the poverty rate from 27.5 per cent in 2001 to 13.7 per cent. Other targets were met in terms of maternal mortality, child (under five) mortality and reversing the spread of tuberculosis. The MDG target for improving the quality of primary and basic secondary education, while maintaining universal access, was also expected to be met (MDG Report, 2015).

### Country competitiveness

15. **Competitiveness and rural finance.** According to the World Bank's *Doing Business 2017* report, Uzbekistan ranks 87<sup>th</sup> out of the 189 economies surveyed, with an index value of 63.03 (compared to a 71.05 of the Europe and Central Asia region). While the report shows that the country is improving its business performance, the "access to credit" indicator implies mixed results as Uzbekistan's 2015 ranking dropped down by 5 points from the year before. The country is now in the 104<sup>th</sup> position according to this latter indicator, and, indeed, the access to formal financial services in the country is remarkably low: only about 1 per cent of people take credit from a financial institution, noting that for the Europe and Central Asia (ECA) region this indicator is 8 per cent.

16. In Uzbekistan, however, people tend to save more actively than their peers in neighbouring countries —31 per cent of people reported saving in any form in 2011 as compared to 20 per cent in the ECA region. Informal, local forms of rotating savings and credit associations are widely practiced

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<sup>44</sup> The number of *dekhan* farms have doubled over the period 2000-14, according to the State Statistics Committee.

<sup>45</sup> State Statistics Committee of the Republic of Uzbekistan, 2010.

among low-income households across the country. Such schemes are common among members of farmers' associations, handicrafts and artisans' associations, and salaried employees. Similarly, there are various financial arrangements occurring between and among agro-processors, wholesalers, and primary producers in Uzbekistan (i.e., as debtors or creditors) and involving transactions that are carried out either in cash, money transfers, or "in kind." No collateral is required from the producer other than pledging the sale of crops financed exclusively to the processor/ wholesaler.

17. **Agricultural Research and Development / Extension.** One critical limitation to rural and agricultural development in Uzbekistan is the lack of modern skills in farm production and the inadequate and narrow experience of the present farming population with farm planning and decision-making. Whilst agricultural research institutions and agricultural extension services are underlined as a vector between the generators and users of agricultural knowledge, these support institutions can hardly fill the knowledge gap of farmers, mainly owing to their organisational set-up and limited government resources. Uzbekistan spent less than 0.5 per cent of the national budget to cover their research & development (R&D) requirements, which is the equivalent of a 0.13 R&D/ GDP ratio.

18. On one hand, Uzbekistan has a large pool of human and scientific resources but few innovations are implemented by the newly established farmers. Uzbek farmers/ livestock producers and experts do not communicate; and extension services are limited, e.g., limited to livestock vaccination in the dairy sector. As second fact, farmers, in general, face saline, polluted and impoverished soils, advancing soil degradation and the losses of top soil due to wind erosion. They also assume livestock production-based livelihoods without access to the suitable breeds, production inputs and know-how, in addition to reductions in forage crop yields, altogether resulting in low livestock productivity. Finally, the lack of a national policy framework on extension services is a main hindrance to conduct effective extension and obtain farm-level results.

19. In practice, veterinary services are provided by the State Veterinary Department, with offices at provincial and district levels. Some veterinary units are established at community level, but the overall coverage and quality of services is low. A private vet service operate in parallel which is utilized by emerging commercial farmers and livestock producers (e.g., artificial insemination) Government policy is to transfer clinical veterinary services to private veterinary practices.

20. **Environment and climate change.** The main environmental challenges in Uzbekistan are: freshwater resource depletion and deterioration of water quality; desertification, salinization and erosion; and climate change. The Amudarya and Syrdarya rivers (primary rivers in the Fergana Valley) are used intensively for irrigated agriculture. Widespread irrigation and the use of poor, water-inefficient and wasting technologies have significantly impacted highly sensitive desert ecosystems. About 26% of croplands and 17% of rangelands have been affected by degradation during the last three decades, leading to substantial loss of productivity. Climate change projections forecast higher temperatures, changes in precipitation regimes, and more severe and prolonged droughts with decreases in water availability. All these environmental impacts will also be felt at the socio-economic level, including to human health.

21. Desertification, soil erosion and salinization, and habitat loss, as a result of unsustainable agriculture and irrigation practices, remain key issues for Uzbekistan's ecosystems and biodiversity. In addition to a loss of habitat and biodiversity, the reduction of forests and other vegetation decreases absorption of carbon dioxide, thus accelerating climate change impacts<sup>46</sup>. The Fergana Valley is, however, considered to be the fertile area of Uzbekistan, and although 28% of irrigated land in Fergana valley suffers from moderate to high salinity levels, resulting in a 20%-30% drop in crop yield, according to discussions with the First Deputy *Hakim* of Namangan region (head of regional administration), soil salinization and fertility is not a major issue (5-6% of all irrigated area in the region has poor soil quality). Furthermore, the World Bank Environmental Assessment for the Fergana Valley Water Recourses Management Project, Phase II (FVWRMP-II) – which is in the same project area as the ADMP, says that "due to natural conditions the soils of project area are not subject to salinity".

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<sup>46</sup> Second National Communication of the Republic of Uzbekistan to the UNFCCC.

Having said that, land statistics for the Namangan region show that average soil fertility, comparing 1999 to 2011, has remained the same (at 57 “soil fertility points” – Grade VI out of X).

22. Uzbekistan is the primary consumer of water in the region, with irrigation accounting for 92% of surface water withdrawal and its agricultural production almost 90% dependent upon irrigation. The irrigation network is extensive, but investments in infrastructure maintenance have decreased in recent years. Few incentives exist for the application of water-saving technologies. Water costs are covered by an overall land tax and are not tied to use of inputs. In the Fergana Valley, water supply in the middle reach of the Syrdarya River mostly depends on flow release by the upstream countries (Kyrgyz Republic and Tajikistan). The deteriorated irrigation and drainage infrastructure, together with issues related to poor water management and water use inefficiency, cause environmental degradation and declines in agricultural productivity – potentially resulting in social tensions<sup>47</sup>.

23. Uzbekistan is threatened by climate change. Projections forecast increasing average temperatures, changes in precipitation regimes, and more severe and prolonged droughts with decreases in water availability. A changing climate will also increase the periodicity and intensity of extreme and hazardous hydro-meteorological phenomena, namely droughts, heat waves, heavy rains, mudflows, floods and avalanches. Higher temperatures and water deficit are also poised to cause vegetation dieback, higher fire risk and insect outbreak, the intensification of species invasiveness, and water quality and quantity reduction. Higher temperatures can also have a detrimental effect on livestock health (thermal stress during the summer months).

24. Finally, smallholder rural families have limited access to productive assets, good infrastructure, energy, modern technology and knowledge, impacting on how they cope with natural disasters and climate change challenges.

## **B. National development policies and strategies**

### **The Welfare Improvement Strategy-II**

25. The GOU vision is for the country to become an industrialized, high middle-income country by 2050. Critical elements for such a transformation include: (i) increasing the economy’s efficiency and competitiveness and reduced dependency on a few commodity exports; (ii) strengthening the financial sector to support private entrepreneurial activity; (iii) diversifying production towards higher value-added activities with demonstrated comparative advantage; (iv) creating jobs for the rapidly growing population of young educated people; and (v) improving governance, including access to information on government policies and their outcomes. The authorities’ approach towards achieving these goals is to continue the gradual transition to a more market-oriented economy, to ensure equitable distribution of growth between regions, and to maintain infrastructure and social services.

26. The GOU’s main economic growth and poverty reduction goals and plans for agriculture and the rural populations are outlined in the **Welfare Improvement Strategy 2013-2015 (WIS-II)**, following the implementation of the initial WIS-I strategy during 2008-2010. The strategy seeks to achieve the sustainable development and welfare of the population on the basis of: institutional reforms designed to continue the liberalization of the national economy, thereby creating a favourable investment and business climate; the modernization of its key production sectors, while increasing the competitiveness of the national economy; the development of the nation’s territories, thus reducing regional inequalities; the increased economic contribution of small private businesses, by increasing their share in national production and the financing by commercial banking.

27. The strategy, *inter alia*, explicitly seeks to increase the efficiency of the agricultural sector; reduce the levels of poverty, nation-wide, and among rural populations; and expand cooperation with international development institutions.

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<sup>47</sup> World Bank and The Ministry of Agriculture and Water Resources Project Implementation Unit for Water Infrastructure. Fergana Valley Water Resources Management Phase II - Project Environmental Assessment and Management Plan. Final Report. 28 March, 2016.

## **Agriculture and rural development**

28. Specific objectives for agricultural/ rural development, within WIS II, include: (i) deepening of structural reforms within the agrarian sector and the diversification of agricultural production; (ii) accelerating the sector's modernization and technological renewal; and of the infrastructure and businesses that process agricultural products; (iii) improving the effective use of land and water resources; (iv) developing and improving the infrastructure of the agro-food market (including science, technology and innovation in key areas such as enhanced animal breeding); (v) increasing the financial stability of farm entities, promoting the liberalization of agricultural policy, and strengthening the rights of agricultural and rural non-agricultural producers; and (vi) promoting the development of the food industry while increasing the processing levels of local agricultural raw materials. Financial support to small and medium-sized businesses, including farms and *dehkan* households, has been identified amongst the priorities for banking sector development.

## **International cooperation**

29. Increased cooperation with international development organizations is an important activity in ensuring the success of the WIS-II, according to the government's plans. In this regard, the task includes the expansion of cooperation with bilateral and multilateral development and financial institutions as well as with those of the international agricultural research and the United Nations system. These include: the Asian Development Bank, the United Nations Development Programme, the Food and Agriculture Organisation, the World Bank, the Global Environment Facility, and many others.

30. The main areas of cooperation with the international organizations include: (i) the technical and technological modernization of industrial infrastructure and industry and the development of high-tech and labour-intensive activities; (ii) the development of rural infrastructure, and the modernization and improvement of the mechanisms of the agro-food sector; (iii) the development of the small businesses and services' sectors; (iv) the development of human capital and the social sector; and (v) addressing environmental challenges and the de identification of the required responses to climate change.

## **C. Country strategies of development partners**

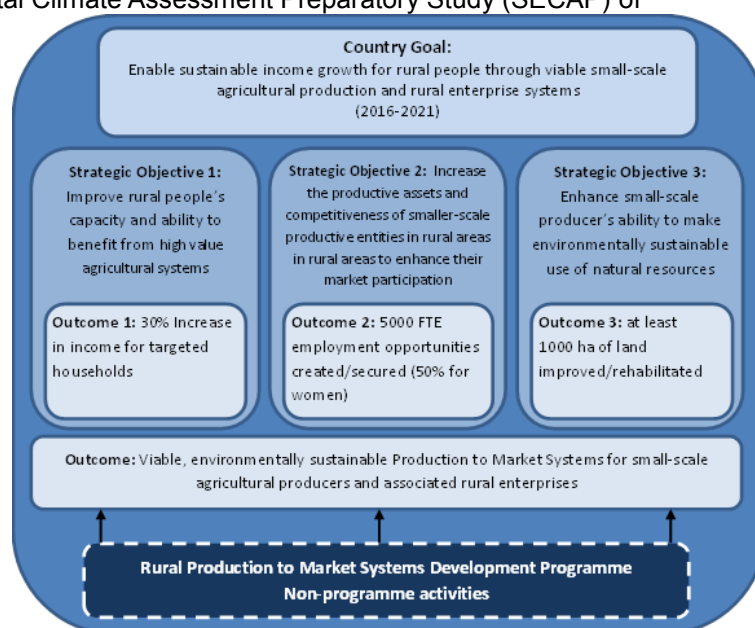
31. **Summary of development assistance.** Development assistance and technical cooperation with the GOU includes some principal bilateral and multilateral organisations. The Asian Development Bank (ADB) has expanded its development assistance to Uzbekistan in support of transport, energy, water, finance, rural infrastructure, and regional cooperation projects. The World Bank's approved Country Partnership Strategy for Uzbekistan (2016–2020) provides support for private sector growth, agricultural competitiveness and cotton sector modernization, and public service delivery. The IFC supports private sector investments in petrochemicals and other sectors. United Nations agencies support access to education and health, environmental sustainability, and governance. The Islamic Development Bank (IsDB) assists with infrastructure and agriculture development. The Japan International Cooperation Agency (JICA) supports human resource and infrastructure development. German development cooperation supports microfinance, agribusinesses, and healthcare development. An Inter-agency Council on Cooperation on implementation of large and strategically important investment projects under the Cabinet of Ministers and the Department on Coordination and Control of Purposeful Utilization of Humanitarian Aid and Technical Assistance Funds of the Ministry of Finance coordinate development assistance.



## IFAD Country Strategic Opportunity Paper 2016-2020

32. This results-based country strategic opportunities programme (RB-COSOP) for the Republic of Uzbekistan covers the period 2016-2021. Uzbekistan joined IFAD in 2011. Since then two projects were approved by IFAD, it is the first COSOP for the country that takes account of national strategies and guidelines for agricultural and rural development, an analysis of three years' country programme experience and the Social and Environmental Climate Assessment Preparatory Study (SECAP) of 2016. The over-arching Goal for the IFAD programme is "to enable sustainable income growth for rural people through viable small-scale agricultural production and rural enterprise systems". The COSOP Goal and the Outcome are both consistent with the IFAD Strategic Framework 2016-2025<sup>48</sup>. The Strategic Objectives (SO) of this COSOP are: (i) SO1: Improve rural people's capacity and ability to benefit from high value agricultural systems; (ii) SO2: Increase the productive assets and competitiveness of smaller-scale productive entities in rural areas to enhance their market participation; and, (iii) SO3: Enhance small-scale producer's ability to make environmentally

sustainable use of natural resources and their proficiency in adapting to climatic variability and shocks affecting their economic activities. **Figure 3** summarizes the COSOP's results framework.



**Figure 1 RB-COSOP Results Framework Logic**

Source: IFAD COSOP, 2017

## United Nations Development Assistance framework 2016-2020

33. The **United Nations Development Assistance Framework 2016-2020 was approved in June 2015** by the Government of Uzbekistan. The UNDAF 2016-2020 is the result of a consultative process to analyse how the United Nations can most effectively respond to Uzbekistan's national priorities and needs and is guided by the Government's people-centred development vision "to build an open democratic and law-governed state with a stable developing economy". The exercise and resulting document are guided by the goals and targets of the Sustainable Development Goals (SDGs), as well as by the Second national Welfare Improvement Strategy (WIS-II). The UNDAF translates these into a common operational framework for development activities upon which individual United Nations organizations will formulate their actions for the period 2015–2020.

34. Complementing national aspirations for economic competitiveness with the urgency of achieving the Millennium Development Goals in Uzbekistan, four inter-related priority areas emerged as particularly critical. In all four, a capacity development paradigm is at the centre of what the United Nations will do, anchored by human rights norms and values, and the principles of gender mainstreaming and inclusiveness. Likewise, the increased involvement of civil society with regard to policymaking processes will be paramount. The four priority areas are: (i) inclusive economic development, with a focus on employment and social protection; (ii) Quality health and education, to fully realize human potential; (iii) Environmental protection, to ensure sustainable development; and (iv) Effective governance, to enhance public service delivery and the protection of rights.

35. A crosscutting issue that underpins the interventions in all priority areas is the explicit focus on vulnerable groups, defined as residents of economically underdeveloped, mainly rural, areas; women,

<sup>48</sup> IFAD Strategic Framework 2016-2025: Enabling inclusive and sustainable rural transformation



particularly home-based workers; labour migrants and their families; children, particularly most-at-risk adolescents; the elderly; HIV-positive people; refugees and people with disabilities. Other crosscutting issues include gender, young people's development, human rights; the development of enhanced legal frameworks; data strengthening; conservation of national heritage; environment and climate change; and gender, age and diversity mainstreaming. Advocacy with regard to the MDGs will also be addressed under all UNDAF Outcomes. Alignment of UNDAF with the IFAD Strategic Framework and the IFAD programme in Uzbekistan is particularly relevant in relation to the following two outcomes:

- **UNDAF Outcome 1: Economic well-being:** Economic well-being of vulnerable groups is improved (residents of economically underdeveloped, mainly rural areas; women, particularly home-based workers; labour migrants and their families; children, particularly most-at-risk adolescents; the elderly; HIV-positive people; and people with disabilities). **National Priorities:** Nationalized MDG Target 1: Reduce poverty by half by 2015; Welfare Improvement Strategy of Uzbekistan: Improve living standards based on robust and inclusive economic growth; form a modern and diversified economy able to compete in world markets; comprehensively develop the whole country; ensure a fair distribution of income.
- **UNDAF Outcome 3: Environment:** Integrate the principles of sustainable development into country policies and programmes. **National Priorities:** Nationalized MDG Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources by 2015.

#### **FAO Country Programming Framework 2014-2017**

36. The Country Programming Framework (CPF) 2014-2017 sets out the priority areas that guide the existing partnership of the FAO with the GOU, and their shared commitment to bringing together: relevant technical assistance; innovative international best practices; and global normative work standards with national and regional expertise in the 2014-2017 period. The CPF was formulated in cooperation with the MAWR and in consultations with stakeholders of the agriculture and food processing and trade sectors; national institutions and the country's development partners, including the UN Country Team. The intervention priorities that were proposed by the Ministry for FAO assistance include:

- Diversification and intensification of farming systems in irrigated areas and intensive fruits and vegetables production;
- Conservation Agriculture, Integrated Pest Management technology and other good agriculture practices in crop protection and assistance for conservation of biodiversity, biosafety and biotechnologies;
- Development of livestock production and elimination of animal diseases;
- Support to preparations for membership of Uzbekistan in the World Trade Organization;
- Aquaculture and development of inland fisheries;
- Forestry; and
- Beekeeping and poultry production.

37. The government is particularly interested in the above priority areas, indicating that increasing exports of higher value-added products fresh fruits and vegetables (in addition to the traditional cotton), is a priority, and that pilot projects should be promoted to introduce new intensive production technologies having as a component new irrigation methods. The CPF states that technical assistance from Technical Cooperation Programme (TCP) projects would include, in addition to production technology assistance for: sustainable management of land and water resources; disaster risk management; and a strong marketing component. The government indicated that, to the extent possible, TCP projects should include a pilot project investment component, serving to identify present novel production and marketing solutions and approaches that could be replicated.

38. The IFAD intervention strategy, through the ongoing HSP and DVCDP, as well as with the upcoming ADMP, also directly fulfil the government's concerns and priorities as outlined in the FAO-GOU country programming framework.

### **ADB Country Partnership Strategy 2012-2016**

39. **Country Partnership Strategy (CPS) 2020.** The CPS 2020 of the ADB shares with WIS II the principal, long-term goal of promoting sustained and inclusive growth, in which infrastructure is a core investment priority for the GOU. Strategy 2020's focus on regional cooperation is also consistent with the country's strategy to strengthen transport connectivity and trade links with regional countries. Strategy 2020's focus on environment and climate change mitigation through renewable energy development is aligned with the government's priority on clean energy development. Private sector and financial sector development, along with gender equity, are common drivers of change in ASDB and government strategies.

40. The **CPS** supports the country's transformation into a modern industrial and service economy through sustained and inclusive growth, a reduction in poverty, and expanded regional cooperation. Strategic assistance to be provided under the CPS is expected to catalyse industrial development, accelerate economic diversification, promote private sector development, ensure climate-resilient investment, and create new jobs for women and men. This CPS prioritizes transport, energy, municipal services, water, and access to finance. Governance and demand-led reforms, regional cooperation and integration, knowledge management, private sector development, gender equity, and climate change and environment are its key drivers. Disaster risk management will be an important consideration in the planning and implementation of infrastructure projects in Uzbekistan.

41. Two areas are of particular interest for IFAD coordination with ADB, according to comparative advantage and economic and geographic targeting strategies:

- **Outcome 1. Agriculture and Natural Resources** (Infrastructure, Environment): Sustained increase in agricultural production and rural incomes in an energy-efficient manner. Focus on Irrigation infrastructure rehabilitation; Irrigation systems management; Agricultural productivity of water improved and sustained at the river basin level
- **Outcome 2. Finance** (Finance Sector Development): Increased financial stability and improved access to finance. Focus: Increased and more effective financial access for SMEs and other non-State borrowers.

42. The CPS's adherence to the changing needs of the country is guaranteed by the Country Operations Business Plan (COBP) 2017–2019. The COBP is consistent with the country partnership strategy (CPS), 2012–2016, and more recent government initiatives. The firm lending program for 2017–2019 of US\$2,160 million has been assessed and prioritized, taking into account project readiness, portfolio performance, and complementarity with assistance from other development partners. The 3-year sector pipeline relevant to IFAD interventions includes the following interventions: (a) Agriculture Diversification Project, firm for 2018, for US\$100 million investment (4.0 per cent of the planned public sector assistance); and (b) the Second Small Business Finance Project, expected to start in 2019, with a US\$100 million investment.

### **World Bank Country Partnership Framework 2016-2020**

43. The Country Partnership Framework (CPF) provides the framework for World Bank Group assistance to Uzbekistan between 2016 and 2020. The Framework proposes a program linked to Uzbekistan's development vision to reach high-middle-income status by mid-century; and in support of the Government's objective to diversify the country's economy. The CPS is designed to support the private sector development, agriculture diversification and public sector delivery as part of the Government's medium-term development strategy.

44. The CPF's principal objective is to support the government's goal of creating up to 500,000 new, productive, and sustainable jobs annually. Against this background, the ten priorities identified in the SCD are grouped into three Focus Areas: (i) private sector growth, (ii) agricultural competitiveness

and cotton sector modernization, and (iii) public service delivery. The Private sector growth includes five objectives: (a) reducing the regulatory burden; (b) strengthening private sector access to finance and financial services; (c) increasing private investment and job creation in agribusiness; (d) expanding private sector participation in the economy through corporate governance, privatization, and public-private partnership activities; and (e) enhancing economic governance. The Agricultural competitiveness and cotton sector modernization includes two objectives: (a) facilitating a market-led modernization of the cotton sub-sector to increase productivity including measures to prevent forced labor; and (b) diversifying agriculture toward higher value, more job- and less water-intensive crops. The Public service delivery includes five objectives: (a) improving the quality of education and health services; (b) extending coverage and targeting of social protection services; (c) increasing access and improving the quality of water supply and sanitation services; (d) promoting energy security and efficiency and reducing the economy's energy intensity; (e) enhancing the reliability and reducing the cost of transport services and strengthening the efficiency of local infrastructure service delivery.

45. Fifteen IBRD/IDA investment projects worth US\$1.9 million are currently under implementation, in addition to two Global Environment Facility (GEF) and Global Partnership for Education (GPE) grant-financed projects worth US\$ 62.6 million.

46. **Private and financial sector development.** The collaboration with the GoU on private and financial sector development is transitioning to a more integrated, strategic, and programmatic dialogue on the identification of existing barriers to a conducive business environment. Over the past year, the World Bank has been collaborating with the authorities on the identification of bottlenecks in the business environment to inform policy options that support private sector growth and economic diversification. Leveraging the previous year's discrete tasks with multiple government agencies, the Bank is aiming to expand the scope of its dialogue with the authorities to include the broad identification of impediments to private sector growth beyond *Doing Business* and the development of a supportive financial sector.

47. The World Bank has developed a good dialogue with the Central Bank of Uzbekistan (CBU) through technical assistance on strengthening bank supervision and regulation, and financial reporting and auditing. The Bank, through its budget and FIRST Initiative funding, has been supporting two areas of focus: (i) the improvement and implementation of select elements of the bank regulatory framework; and (ii) the revision and implementation of a more risk-oriented bank assessment and a prompt remedial action framework. At the same time, the Bank is also implementing a FIRST Initiative project on financial reporting and auditing, with its main goal to create an adequate policy environment and improve institutional capacity for financial reporting in the banking sector, in line with accepted international practice.

## D. Agriculture – crop and livestock sectors development

48. **Overview.**<sup>49</sup> Agricultural GDP grew by 6.6 per cent on average in the period of 2003 to 2016. Robust growth was also reflected in an increase in agricultural labor productivity, which grew by 5.6 per cent during the period 2005-2011, faster than labor in other sectors of the economy, putting it on a par with Columbia and lower than Brazil. About 60 per cent of output is generated from crops and 40 per cent from livestock. Increased output was driven by rising real prices for crop and livestock commodities and rising crop yields. Crop yield grew by between 12-30 per cent during this period. Despite the share of agriculture in output and total employment is declining, agriculture will continue to be a critical source of rural employment and an important driver of poverty reduction. FAO projects that while the proportion of people living in rural areas will decline, the absolute number of people living in rural areas will remain largely unchanged as the population grows. Furthermore, poverty is concentrated in rural areas where 75 per cent of the low-income population resides. The Government's Agricultural Modernization Strategy recognizes the need for diversification out of cotton

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<sup>49</sup> The data and information included in this chapter are drawn largely from Asian Development Bank (Detailed Sector Assessment: Agriculture, Natural Resources, and Rural Development, April 2016), World Bank (Fergana Valley Water Resources Phase II Project Information Document, December 2016), IFAD and UNDP (Livestock Production in Uzbekistan: Current State, Challenges and Prospects. 2010) plus others as cited.

and into high value, labor intensive production and processing including horticulture (supported by the ongoing horticulture development projects) and livestock both of which are expected to contribute to significant rural job creation.

49. While the share of Government investment in agriculture was 5.2 per cent in 2011, by 2014 this had fallen to only 4.6 per cent. The main factors accounting for this change are changed priorities in the last three years, where the Government has concentrated investments mainly on other sectors such as industry, construction, housing, communal services and others. Nevertheless, the volume of overall agricultural production in terms of both quantity and value shows a tendency to increase in recent years. This is primarily driven by the small scale producers, usually operating at a family level with low costs rather than the industrialized cropping of cotton. More recently, Government has realized the growing importance of the horticulture sector in its increasing contribution not only to the national GDP, but also in the increasingly important role that fruits and vegetables play in the agriculture export market. Plus the contribution that production of fruits and vegetables makes to rural household income through the *dehkan* plots is now realized as significant. Subsequently, recent policies have been announced that aim to support and develop this sector significantly over the next 4 to 5 years. Looking forward, the Government aims to enable Uzbekistan to become an industrialized, high middle-income country by around 2050, based on a strategy of continuing the transition to a more market-oriented economy, to ensure equitable distribution of growth between regions and to maintain infrastructure and social services.

50. Irrigated land accounts for more than 90 per cent of crop production. About 44 per cent of the total irrigated area is in the Syrdarya basin and 56 per cent in the Amu Darya basin. The state of the irrigation system has deteriorated — ADB's own Sector Assessment in the Country Partnership Strategy comments that "Uzbekistan has over-allocated its water over too large an irrigated area; and is facing increasing water scarcity and salinity, poor service delivery, and low agricultural productivity of water. These problems are interrelated, occur at the river basin level, and require new solutions and a challenging transition from infrastructure development to integrated river basin management. At the irrigation system level, infrastructure continues to deteriorate, organizational management capacity remains limited, and agriculture faces various constraints."

51. Climate change projections for Uzbekistan from 2005 to 2050 indicate that (i) water demand will increase from 59 b m<sup>3</sup> to 62–63 b m<sup>3</sup>, (ii) supply will decrease from 57 b m<sup>3</sup> to 52–54 b m<sup>3</sup> and (iii) the present water deficit will increase by over 500 percent from about 2 b m<sup>3</sup> to 11–13 b m<sup>3</sup>. Increased efficiency is the ubiquitous prescription to address water scarcity. However, the only real way to save water and increase its availability is to reduce consumption, primarily by reducing overall irrigated area by taking the least productive land out of production.

52. About 3.3 million ha of the irrigated land requires drainage. The total length of main and inter-farm collectors was about 30,000 km, while the on-farm collector-drainage network extended about 110,000 km. The intra-farm open collector-drainage network is to some extent satisfactorily maintained in Bukhara, Kashkadarya, Fergana and Namangan regions. In other areas it is in a less than satisfactory state of repair (FAO AQUASTAT).

53. **Soil salinity and increasing groundwater table:** While the Fergana Valley has abundant surface water resources and large quantities of good-quality groundwater, the lack of drainage facilitates waterlogging and soil salinization. At present, both of these constrain agricultural production; degrade the environment, and damage housing and public infrastructure. Soil degradation, low water-use efficiency, over-irrigation, weak infrastructure and institutions, and a lack of farmers' incentives are the main factors impeding the productivity and sustainability of irrigated agriculture in the WB project area (Rishtan, Baghdad and Altirik in the Ferghana Oblast), and tend to reinforce each other. These issues are summarized below.

54. *Shallow Groundwater Levels, Soil Salinization and Environmental Degradation.* About one-third of all irrigated land in Uzbekistan has a shallow groundwater level (GWL). Shallow GWLs have developed in a cumulative process as a consequence of long-term under-investment in drainage

infrastructure in irrigated areas and over-irrigation. During the last ten years alone, the area characterized as waterlogged (GWL within 2 meters of the surface) has increased by 30 per cent. In turn, upper layers of soil have become salinized through capillary action, accumulating a heavy load of salt that threatens agricultural productivity and the environment. This process has operated with particular severity in the Fergana Valley and especially the project area (Rishtan, Baghdad and Altirik in the Ferghana Oblast), where recent deterioration of the drainage system has caused waterlogging in most areas. Some areas have developed standing water as a result; elsewhere, shallow GWLs cause flooding in settlement areas, damaging houses and infrastructure.

55. *Low Water Use Efficiency.* Throughout Uzbekistan, agriculture is characterized by low water-use efficiency. Water-use efficiency overall is reportedly 30 per cent and in some areas is yet lower. Low water-use efficiency is one cause of the shallow GWLs, in a vicious cycle of productivity loss: overuse of water leads to water-logging and excessive soil salinity, which leads back to overuse of water as farmers apply larger volumes of water to crops for leaching to keep the soil salinity under control. Further, as a result of leaking irrigation canals, water diversions do not reach the fields in full<sup>50</sup>.

56. *Decreasing ground water extraction.* Since 1990, after fragmentation of the farming system into small farms each of 3-10 ha area, there was a lack of systematic groundwater governance, which could facilitate farmers' cooperation on operation and maintenance (O&M) of the wells. Most of the private farmers, gaining low incomes from cotton and wheat, are not able to cover O&M costs or to install new wells costing US\$15,000-25,000/well, while they have access to free canal water subsidized by the state. Reduction of the state investment in O&M of wells since 1990 has made their centralized exploitation difficult. As a consequence, from 2001 to 2005, groundwater extraction has gradually decreased to 2,700 million m<sup>3</sup> / year and, moreover, there is a risk that groundwater extraction will further reduce to the levels of the 1980s. The reductions in groundwater extractions were followed by rising of the water table and increasing salinity build-up in the topsoil, especially in the lower part of the basin. For example in 1992, the irrigated area with water table less than 2 m amounted to 38 per cent which made up 74 per cent of the total in 2007. High evaporation from the shallow water table has increased the salinity build-up in the topsoil<sup>51</sup>.

57. The **wheat and cotton situation:** The broad agricultural sector has been extremely important to the Uzbek economy, primarily through its cotton production with Uzbekistan being currently rated as the 6<sup>th</sup> largest producer of cotton in the world with total area under cotton in 2014 of 1.28 million ha and production reaching 3.40 million tons. However, in 1991 total production amounted to 4.65 million tons, 37 percent higher than the 2014 figure.

58. Wheat is the second major crop produced in Uzbekistan, with Government reporting a total grain yield of 8.05 million tons in 2014-2015 production season, out of which approximately 93 per cent (7.5 million tons) is considered to be wheat. Increasing grain production was especially important following independence as Government policy focused on aspects of national food security. During this period Uzbekistan pushed hard to increase grain production, moving land and resources into the sector and the country changed from dry land wheat cultivation practices to production on irrigated land. This policy has gradually paid benefits in increased yields (wheat yields on irrigated land are nearly always higher than on dry land) and thus higher levels of production of wheat and flour. However, it has also led to a diversion of resources, such as land and irrigation water away from cotton, but also from traditionally high-value fruits and vegetables to wheat, a relatively low-value crop.

59. Over 80 percent of irrigated land is dedicated to either wheat or cotton (2015). Efforts to expand irrigated forage production must incorporate efforts to improve water use efficiency. Over 80 percent of the country's water originates from neighboring countries. If current trends in water usage were to continue, the country could reach water scarcity levels by 2030. Since the Presidential Decree No.

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<sup>50</sup> WB-PAD. Fergana Valley Water Resources Management Phase-I Project. Aug 2009.

<sup>51</sup> Karimov, A., *et al.* Transboundary Aquifers of the Fergana Valley: Challenges and Opportunities. Dec 2010, UNESCO Paris.

2460, the Government has made some small but significant efforts to diversify agriculture. About forty raions have been allowed to reallocate land from cotton and wheat to other production including forage crops and herein lies an opportunity to improve land use planning for crop diversification and to demonstrate its benefits such as improved soil fertility.

60. The **high value crops**. During the period 2005-2015, the horticulture sector witnessed dramatic increased importance to the economy. Production areas have increased significantly: vegetables by 41 per cent, melons (and watermelons) by 53 per cent; fruits and berries by 28 per cent. The Government aims to enhance the horticulture value chain to increase export of horticulture produces from 0.6 million tons in 2015 to 2.2 million tons by 2020. It is estimated that this effort will require a budget of approximately US\$500 million to finance farmers and enterprises to improve and/or set up intensive orchards, cold storages, processing and packaging equipment. Meanwhile, during 2010-2014 as part of a programme of support by Government, the introduction of modern planting materials (from Europe) led to the creation of new orchards on an area of almost 50 thousand ha, including more than 14 thousand ha of intensive orchards, as well as vineyards on an area of 23 thousand ha. Further reforms, to support improved logistics, processing and exports for a number of activities, including horticulture have also been indicated in the sector plan for 2016–2020 detailed in the Presidential Decree PP-2505.

61. As part of the export promotion strategy, a farm size optimization programme targeting the horticulture sector was announced in December 2015 (Presidential Decree 2460) and resulted in an increase of 57,969 farmers in the horticulture sector alone. Under this programme, numbers of registered horticulture and grape producers increased by 196 per cent while for farmers registered as producing fruits and vegetables, the change in numbers was increased by 86 per cent. This programme addresses inequities in rural employment and brings more unemployed people into the workforce as registered farmers. However, small farm sizes bear risks of inability to attract credit because of issues with levels of fluctuating profitability, available cash flow, and lack of suitable security and collateral to access finance as well as inefficiencies of scale. Also, most available bank loans carry a short tenor of up to one year, while repayment schedules do not match farm cash flows generated by the typical multiyear agricultural product cycles. Farmers and small businesses have limited business sophistication and skills, which impede their growth, with surveys indicating that they lack access to information on market opportunities, suppliers, competitors, technology, and banking products.

62. **Horticulture water consumption.** The Government policy to shift to horticultural crops has helped improve the water demand situation since they normally use less water than cotton. A recent study by Aldaya, Munoz and Hoekstra<sup>52</sup> estimate that about 4,426 m<sup>3</sup> of water is required to grow a ton of cotton in Uzbekistan; about 2,068 m<sup>3</sup> of water is required for wheat. Although comparable numbers are not available for Uzbekistan, a study of global water footprints using similar methodology (Mekonnen and Hoekstra<sup>53</sup>) suggests horticultural products require substantially less than cotton and in some cases less than wheat. For example, grapes require, on average, 2,400 m<sup>3</sup> of water per ton, while apples require about 820 m<sup>3</sup>. New orchards in Uzbekistan generally employ modern and efficient drip irrigation technologies and therefore most likely less water than international average values would suggest.

63. Strong research institutions have helped sustain productivity growth in the horticulture subsector. Research related to fruit trees, grapes and wine making is managed by the Schroeder Institute, which has operated for 70 years. The Institute has branches in each region of the country, and has a well-established production and research capacity. Research on horticultural field crops, including melons and potatoes is managed by the Uzbek Research Institute for Vegetables, Melons

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<sup>52</sup> Aldaya, M.M., G. Munoz and A.Y. Hoekstra. 2010. Water footprint of cotton, wheat and rice production in Central Asia. Value of Water Research Report Series Number 41. Delft, Netherlands, UNESCO-IHE.

<sup>53</sup> Mekonnen, M.M. and A.Y. Hoekstra. 2010. The green, blue and grey water footprint of crops and derived crop products. Vol 1: Main Report. Value of Water Research Report Series Number 41, Delft, Netherlands UNESCO-IHE.

and Potatoes (RIVMP). The RIVMP is also a long-standing research center, having been established in 1933.

64. Taken together, changes in land policy, productivity and incentives have led to a greater role for horticulture; production has grown due to improved productivity and also through an expansion of area planted. Though output from *dekhan* farms remains important, horticultural production is shifting toward private farms.

65. **The livestock sector.** The increase in livestock sector output<sup>54</sup> from 2003-2013, specifically 71 per cent for milk, 54 per cent for beef, 101 per cent for lamb and goat meat, appears largely due to the steady rise in the number of cattle and sheep/goats which increased by 63 per cent and 60 per cent respectively during this period. While data is lacking, milk and meat yields are reported to have increased only slightly during this period. The strongest growth came from non-regulated sectors, notably horticulture, while cotton production, which is highly regulated, has been stagnant since 2008. Given that the livestock sector benefited from rises in real prices for livestock products from 2003-2013 and is not heavily regulated, higher output growth might have been expected, suggesting that fundamental constraints to improved livestock productivity remain.

66. The country is a net importer of meat and milk. The Government is keen to improve standards of human nutrition. Uzbekistan increased its average daily dietary supply (percentage of requirements) from 101 per cent (compared to the world average of 116 per cent) in 2003 to 122 per cent (compared to the world average of 122 per cent and Kazakhstan 138 per cent) in 2014. The Government sees national self-sufficiency as a means of improving the population's access to livestock products and uses export restrictions to achieve this. While the immediate market opportunities are for import substitution rather than export, such policies are counter-productive as they create uncertainty and discourage long-term investment in processing.

67. The national herd comprises some 10 million head of cattle and 17 million sheep. Some 70,000 head of improved cattle (mostly dairy breed heifers, few bulls) have been imported from European countries since 2008<sup>55</sup> and this popular programme is continuing. While dairy, beef and sheep production can be seen to some extent in most locations, dairy cattle breeding is most concentrated in irrigated crop areas closest to urban centers, whereas beef production is most concentrated in mountain pastures. Karakul sheep which produce high-value skins as well as meat and milk are raised in semi-arid and desert locations in the west, where camel production is also significant.

68. Artificial insemination (AI) is widely used in the country for household, *dekhan* and private farm cattle alike. There is an active Livestock Reproduction Association with headquarters in Tashkent and branches in most regions. Pedigree bulls are imported to a central breeding station where semen is collected, frozen, held and distributed to over 3,000 AI points in the country, most of which are Zoo-Veterinary Stations in villages. Larger dairies employ their own inseminators. Specific bull semen can be imported by this association at farmer's request. At district Zoo-Veterinary Stations, records of individual bull and cow inseminations are recorded with paper records which are not analyzed critically and no milk volume or composition testing are carried out. An unusual AI protocol is practiced which is to inseminate cows twice over a 12 hour period and at very low cost (~1,500 UZS per insemination). Larger private dairies imported purebred cattle breeds from Europe and about 610 farmers permanently identify these cattle and their offspring with numbered ear tags and maintain a herd book of registered cattle.

69. The share of livestock production in total agricultural output was 41 per cent in 2015. The share of livestock production from *dekhan* farms has gradually increased to more than 90 per cent of output (96 percent of milk, 95 per cent of meat and 55 per cent of eggs). On average, *dekhan* farms have about 3 cattle and 8 sheep or goats while private farms hold an average of 55 cattle and 15 sheep and goats. However, in 2015, the share of cattle in *dekhan* farms was 94.1 per cent and only 4.9 per cent in large private farms, of which cows represent 94.6 per cent and 4.8 per cent; sheep and goats

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<sup>54</sup> Average of 2003-2005 versus 2011-2012

<sup>55</sup> Mr. Dilshod, Chairman, Livestock Reproduction Association, Tashkent.

83.8 per cent and 7.4 per cent, and poultry 64.4 per cent and 11.8 per cent, respectively. Productivity is low, milk yields in *dekhan* farms averaging 1,300 liters per lactation.<sup>56</sup> Even so productivity is low from local breed dairy cows weighing about 300-450 Kg liveweight. Low milk yields mean that households only generate marketable surpluses beyond household needs in the summer. This along with weak cooling and distribution infrastructure mean that *dekhan* farms are not well integrated into dairy supply chains. About two-thirds of milk and dairy products are consumed at home, the rest being sold to the market or processors through traders.

70. Insufficient fodder is recognized as being a major constraint in Uzbekistan. This is a result of restrictions on land use which require private farms to allocate a fixed amount of land to wheat and cotton production, leaving insufficient land for fodder crop production, for zero grazing (cut and fed fresh in stalls), hay or silage production.

71. There is potential to increase the productivity of pastures in arid areas but there are inter-related environmental and social constraints to doing so. Current stocking intensity on arid pastures is reported to be two-three times sustainable levels. Arresting pasture degradation will require (i) moving towards more sustainable grazing plans involving better planned seasonal movement of livestock; (ii) resting severely degraded pastures to allow species recovery; (iii) planting of improved drought resistant species; and (iv) investing in water boreholes and tracks to improve access to underutilized areas. In such an environmentally fragile area, investment in infrastructure without plans to prevent over-grazing around new boreholes could be counter-productive.

72. A range of other factors which require further analysis are likely to constrain production including: (i) availability of quality forage crop seeds due to insufficiently resourced and equipped Government agencies responsible for seed breeding and selection, variety testing and listing, variety maintenance, testing and inspection and seed farms responsible for multiplication and distribution; (ii) insufficient access to irrigation for forage production as a result of degraded irrigation infrastructure and institutions for local-level water management; and (iii) the absence of funding and institutional arrangements for advisory services on forage production and animal husbandry. Inadequate veterinary services affect not only animal productivity but also trade and human health. While information on disease prevalence is limited, the veterinary service recognizes the importance of improving disease prevention and control and has prioritized the control of several zoonotic and transboundary diseases including brucellosis, echinococcosis, foot and mouth disease, tuberculosis, *peste des petits ruminants* (PPR), rabies and anthrax.

196. **Standards.** The Russian Federation (RF) now accounts for 80 per cent of all horticultural exports from Uzbekistan, but Uzbekistan products only account for 3 to 4 per cent of all fruit and vegetable imports into the RF. A growing share of horticultural goods in the RF reaches consumers via supermarkets. This poses a risk to Uzbek exporters since supermarkets have higher food safety and packaging requirements than the traditional wholesale markets that currently handle most of Uzbekistan's exports. Under current rules, horticultural goods shipped to the RF from Uzbekistan face reduced tariffs, but this advantage will likely be lost as the RF extends most-favored nation tariff rates to fellow WTO members. RF food product standards are likely to change as well, since the standards used to settle food safety and quality disputes under the WTO are different from the set of standards that currently govern horticultural trade in the region. The same quality and safety concerns apply to livestock or livestock products imported into the RF. As and when, Uzbek dairy or beef processors wish to access the high-value RF market, their products will most likely be subject to tough international Sanitary and Phyto-sanitary Agreement standards. The issue even more pressing in view of the trading with members of the recently established Eurasian Economic Union (EAEU). Uzbekistan also needs to meet the norms of the union. This would require harmonization of many agricultural and food standards (out of 266 country-level standards in agriculture and food).

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<sup>56</sup> Mature milking cows might weight 300-400 kg live weight so caution should be exercised in comparing them to European herds where cows may weight 500-700 kg.



## E. Irrigation and water management in the Project area

73. The economy of Uzbekistan is intrinsically influenced by its geography. The country is situated in the basin of two main rivers: the Amu Darya in the east and south, which runs from Tajikistan and forms the Uzbek borders with Afghanistan and Turkmenistan, and the Syrdarya in the east and north, which flows from Kyrgyzstan through Kazakhstan and their tributaries and rivers, of which the Kashkadarya and Zarafshan are the two main ones. The main flow of the Amu Darya is formed within the territory of Tajikistan and the Syrdarya in Kyrgyzstan. The total area of the Syrdarya river basin, which serves the Project area in the Fergana Valley, is about 345,000 km<sup>2</sup>. The main river is formed by the confluence of the Naryn and Kara Darya plus the Chirchik — the biggest right-bank tributary of the Syrdarya. The river has a maximum discharge in June (581 m<sup>3</sup>/s), minimum in February (69.1 m<sup>3</sup>/s). The Syrdarya has a length of 2,800 km, 2,000 of which are outside of Uzbekistan.

74. The Fergana Valley occupies only 4 per cent of the Republic of Uzbekistan area, while more than 20 per cent of the overall irrigated agriculture lands of the country (744,000 ha<sup>57</sup> out of total 3,70M ha<sup>58</sup>) are in this Valley. This demonstrates significance of the Fergana Valley in cultivated agriculture of the country, as well as the importance of the sector in the economy of the Valley. Due to arid conditions, irrigation is a key for cultivated agriculture in the Fergana Valley. The existing irrigation infrastructure has been constructed decades ago during soviet period and is comprised of: 825km of main and 7,375km of secondary canals (more than the half are earth canals); almost 40,000km of tertiary canals<sup>59</sup>; around 500 irrigation and drainage pump stations<sup>60</sup>; around 8,000 deep wells<sup>61</sup>; drainage network over 462,000 ha (more than the half of irrigated lands) comprised of open and closed drains and vertical systems<sup>62</sup>; dozens of reservoirs; etc.

75. Government's large-scale interventions in the sector so far, have helped to keep majority of irrigable lands cultivated. However, this has been achieved through huge efforts to maintain the system functional, which has low efficiency and does not provide long lasting solutions. These are mostly rehabilitation measures for the critically deteriorated section of the system and structures without consideration for development and modernization, such as shifting from dominantly surface irrigation to water efficient technologies (e.g. drip or sprinkler irrigation), which besides water savings, may substantially increase productivity of lands. Almost all main, inter-farm and on-farm canal networks remain open; are mostly earth or lined/flume canals with substantially high water losses and inefficient in water distribution.

76. The main irrigation water source for Fergana Valley is the Syrdarya River, the second richest river in the region. The Syrdarya River starts in Fergana Valley after merging of Narin Darya and Kara Darya Rivers. Both these rivers are formed in Kyrgyzstan with average annual flow of 17 billion m<sup>3</sup>.<sup>63</sup> Syrdarya River after Fergana Valley flows into Tajikistan, then again Uzbekistan and lastly Kazakhstan. Water use from Syrdarya River is regulated by international agreements. The valley has also other smaller sources for irrigation such as tributaries of Syrdarya River and ground water. The latter is widely used wherever it is available and technically feasible.

77. Annual water intake for irrigation in Fergana Valley is estimated at 10 billion m<sup>3</sup>. Considering the overall efficiency of the network (60 to 70 per cent), this is still sufficient for irrigation of over 900,000 ha of agricultural lands in the valley. However, water is not equally available at different locations. Lands located near the main canals and water sources are over-irrigated, while remote/tail lands do not receive adequate and reliable water. This is due to deteriorated infrastructure; inadequate water

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<sup>57</sup> Statistical Service Data (2016). These are factually irrigated lands in 2016. Overall irrigable lands are 912K ha.

<sup>58</sup> Irrigation in Central Asia in figures - FAO, 2012

<sup>59</sup> Irrigation Infrastructure in Fergana Today: Ecological Implications – Economic Necessities.

<sup>60</sup> Improving Water Security: Lessons from IWRM Cases in Indonesia, Nepal and Uzbekistan. Regional Workshop Chiang Mai, Thailand, 17 May 2013.

<sup>61</sup> Transboundary Aquifers of the Fergana Valley: Challenges and Opportunities. IWMI, Central Asia Office.

<sup>62</sup> Statistical Service Data (2016)

<sup>63</sup> Improving Water Security: Lessons from IWRM Cases in Indonesia, Nepal and Uzbekistan. Regional Workshop Chiang Mai, Thailand, 17 May 2013.

management and distribution; application of surface/furrow irrigation, known as one of the most water consuming and inefficient method.

78. Water saving technologies are also critical to cope with recorded and anticipated climate change. As per the last assessments with long-term forecasts to 2050 (ADB, 2014)<sup>64</sup>, air temperatures are expected to increase by 3°C, water flows in Syrdarya River in the lower flows will reduce by 22-28 per cent, evaporation will increase and water needs will increase by 3-4 per cent. No significant changes in precipitation range are predicted by 2050 in Fergana Valley, however changing in distribution is expected. Because of twice reduced glaciers (estimated 10 per cent of water source for Syrdarya River), flows in the rivers will be increased during the flood season (April-June), while significant reduction will be observed during the highest demand season (July-September). Furthermore, more frequent extreme droughts, floods, extremely cold and hot temperatures are predicted, that will certainly have substantial negative impact on cultivated agriculture.

79. To mitigate challenges of the climate change and to reduce vulnerability of cultivated agriculture of the country, the Government of Uzbekistan has undertaken specific measures to encourage application of water saving technologies. Particularly, farms which are equipped with drip irrigation network are exempt from land taxes, a gradual plan for diversification from cotton (which has high water demand) to high value crops (e.g. horticulture, vegetables, melons) has been adopted for the entire country and regional level, local governments (Regional *Hakimiats*) have established 5 year plans for sequential increase of areas equipped with modern irrigation equipment, privileged loans are made available encouraging development of modern agriculture initiatives including installation of drip irrigation systems; etc.

80. Considering aforementioned privileged conditions and benefits from application of modern agricultural practice, number of big farmers in Fergana Valley during the last years have established intensive gardens and vegetable farms over few hundred hectares each. As a necessary attribute, these farms are equipped with modern drip irrigation systems.

81. The State body responsible for water resource management, irrigation and drainage is the Ministry of Agriculture and Water Resources (MAWR). Under MAWR ten Basin Administration of Irrigation Systems (BAIS) are in charge of the operation of irrigation and drainage systems (including day-to-day water resource management). Within the BAIS, the Administration of Main Canals (AMC) is responsible for the main canals; the Administration of Irrigation Systems (AIS) is responsible for inter-farm canals, and the Hydrogeological Ameliorative Expeditions responsible for drainage. The BAIS fully depend on the MAWR for their limited budget. Farmers pay a low water tax as part of their land taxes, but this tax flows directly to Government budget. For the purpose of maintenance of the drainage systems (both main collectors and on-farm network) an Amelioration Fund has been established with an annual allocation of about UZS 100.0 billion from the State budget. About 45% of allocated funds are used for procurement of machinery and equipment for construction companies, some 35% for reconstruction/rehabilitation of inter-farm collectors, and about 20% for rehabilitation/reconstruction of on-farm collectors and drains.

82. Maintenance, management and operation of on-farm irrigation network are the responsibility of water users associations (Water Consumers Associations, WCAs in case of Uzbekistan). General performance of WCAs has been weak, due to overall low capacity in management and operational skills. The process of WCAs establishment in Uzbekistan was initiated in 2003-2004 (following the liquidation of former kolkhozes and sovkhoses (*shirkats*)) mostly within administrative-territorial boundaries, irrespective of available irrigation schemes and water sources. Furthermore, when registering, the WCAs have not received a nonprofit status and the membership consists of only registered farmers involved in cotton and wheat cultivation (excluding *dekhans* and other water users). During recently conducted 'optimizations' of farms (i.e. elimination of loss-making farms and their integration with stronger and more sustainable farms) the total number of potential WUA members has been reduced more than twice.

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<sup>64</sup> ADB, Climate Change and Sustainable Water Management in Central Asia.

83. The current average annual per hectare fee for WUA services is about UZS 12,000, varying from UZS 7,000 to 20,000. The service fee established by WUAs mainly consists of limited operational expenses and almost no activities are planned for maintenance works, which does not reflect the minimum required funding for sustainable operation. Furthermore, even with this extremely low level of fee the payment rate is not exceeding 45-50% the operational capacity of WCAs are worsen. Payment for WCA services are conducted through the banking system from the Government loan provided for cotton and wheat cultivation. However, the priority payment from the Government loan is given to inputs such as fuel, seeds, fertilizers etc., while for the WCA services there are as a rule not enough resources remaining.

## F. Access to Finance in Uzbekistan

84. The financial sector of Uzbekistan is dominated by the banking sector holding about 95 percent of total financial sector assets. Providers of lending services as of April 2017 include 27 banks,<sup>65</sup> 29 microcredit organizations,<sup>66</sup> and 46 pawnshops.<sup>67</sup>

85. **Banking sector.** Per CBU, as of 1 April 2017, the total capital of the banking system is over UZS 9.9 trillion (approx. US\$ 2.57 billion) which is 23.3 per cent higher than the year before. The total banks' assets as of April 2017 are UZS 90.1 trillion (US\$ 23.4 billion), or 29.2 per cent higher than in April 2016. Per CBU, the capital adequacy of the banking system is 23.5 percent and its liquidity is 64.4 percent, which is 3 and 2 times higher than minimum international requirements, respectively. The total value of deposits in the banking sector grew by 3.5 times in the past 5 years, including the growth by 25.2 per cent in the past 12 months.<sup>68</sup> Uzbek banks' corporate and retail deposits comprise only about 56 per cent of their non-equity funding -- two other major sources are stable and long-term financing from the Uzbek government (20 per cent) and funding from international financial institutions (15 per cent).<sup>69</sup>

86. According to Moody's,<sup>70</sup> Uzbek banks' problem loan ratio declined to 3.5 per cent at year-end 2015 from 3.9 per cent a year earlier, owing largely to nearly 25 per cent loan growth over this period. Moody's notes that, in the long term, this rapid loan growth could cause asset quality deterioration against the backdrop of a less favourable operating environment. In 2016, according to CBU, nonperforming loans (NPL) remained relatively stable at 0.4 per cent, while Moody's assessed NPLs at 4-5 per cent in August 2016. Nevertheless, Uzbek banks' capital buffers and earnings are sufficient to absorb incremental credit losses over the outlook period. With respect to profits, Moody's forecasts system-wide return on average assets and return on average equity to remain around 1.5 percent and 15 percent, respectively.

87. Per CBU,<sup>71</sup> as of April 2017, the value of loans extended to the real sector grew by 29.9 per cent as compared to April 2016 and exceeded UZS 57.3 trillion (US\$ 15 billion). In the same period, the volume of loans for entrepreneurial purposes was UZS 4.6 trillion (US\$ 1.2 billion), including UZS 1 trillion (US\$ 260 million) in microloans; both figures represent a 1.3 times growth as compared to the year before. About 11 per cent of the enterprise loans' volume (UZS 514 billion – US\$ 135 million) was extended to women; this is 25.5 per cent higher than as of April 2016. UZS 25 billion (US\$ 6.5 million) was provided as microcredit to low-income families.

88. There are several **subsidized government programmes** currently realized through banks in Uzbekistan aimed at increasing lending volumes to specific target categories, primarily through microloans:

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<sup>65</sup> Including 3 state banks, 11 joint stock commercial banks, 8 private banks, and 5 banks with foreign capital. Source: <http://www.cbu.uz/ru/kreditnye-organizatsii/kommercheskie-banki/golovnye-ofisy/>

<sup>66</sup> <http://www.cbu.uz/ru/kreditnye-organizatsii/mikrokreditnye-organizatsii/>

<sup>67</sup> [http://www.cbu.uz/ru/kreditnye-organizatsii/lombardy/?PAGEN\\_2=3](http://www.cbu.uz/ru/kreditnye-organizatsii/lombardy/?PAGEN_2=3)

<sup>68</sup> <http://www.cbu.uz/ru/press-tsentr/dopolnitelnay-informacia/80401/>

<sup>69</sup> [https://www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Uzbek-banking-system-amid--PR\\_352728](https://www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Uzbek-banking-system-amid--PR_352728)

<sup>70</sup> [https://www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Uzbek-banking-system-amid--PR\\_352728](https://www.moodys.com/research/Moodys-maintains-stable-outlook-on-the-Uzbek-banking-system-amid--PR_352728)

<sup>71</sup> <http://www.cbu.uz/ru/press-tsentr/press-relizy/2017/05/84843/>

- a. *Vocational school graduates.* In the first quarter of 2017 alone, banks have extended UZS 79.8 billion (US\$ 21 million) in subsidized loans to youth – vocational school graduates – for the start-up and development of their micro businesses, including those in the agricultural sector. This is 1.3 times more as compared to the same period in 2016.
- b. *Microbusinesses.* Another such programme is the one aimed at the expansion of microcredit activities through banks, in accordance with Presidential Decree 2746 of 31 January 2017.<sup>72</sup> In 2017, in Tashkent alone the programme provides for the disbursement of UZS 277 billion (US\$ 73 million) in microloans of up to 200 minimum wages<sup>73</sup> (UZS 30 million – US\$ 7,900) for a term of up to 3 years, with a 6-month grace period and interest rates ranging from 6 to 9 percent per annum, to small and micro entrepreneurs. Thus the programme aims to reach over 9,000 borrowers in Tashkent alone.
- c. *Household-based start-up businesses, including those in remote regions.* Of high relevance to agricultural lending, starting from March 2017 a new government programme has been launched aimed at involving households in entrepreneurial activities, especially in rural areas through the issuance of subsidized bank microloans via a simplified procedure.<sup>74</sup> Microloans of up to 20 minimum wage amounts - UZS 3 million (US\$ 788) will be provided to start-up businesses (including family businesses without registering a legal entity) without a formal collateral, but with goods purchased with the microloan as collateral. Microloans of up to 60 minimum wages (UZS 9 million – US\$ 2,360) will be provided with either formal collateral or a guarantee from local communities. New microbusinesses registered before 1 January 2021 and engaged in the approved subsectors (including agriculture) will be exempt from taxation for a period of 6 months. Start-ups in 47 remote and hard-to-reach areas, as well as regions with excess labour resources, will be provided with loans of up to 100 minimum wages (UZS 15 million – US\$ 3,900).<sup>75</sup>

According to CBU,<sup>76</sup> over 5 million households were surveyed to assess their needs in funding, and an amount of UZS 5 trillion (US\$ 1.3 billion) was allocated for this purpose for 2017. During the first quarter of 2017, 240,000 households have been already reached with loans up to UZS 15 million (US\$ 3,900) for 3 years, with a 6-month grace period, and at 9 percent per annum. The plan is to reach 400,000 households with such loans by the end of 2017. To be able to implement the programme and reach significant numbers of households, banks' representative visit people at their homes, going door-to-door, explain the advantages and features of the programme, and offer template business plans for a variety of small and micro business activities, including agriculture, along with a loan.<sup>77</sup> There are 9 banks that are tasked with the implementation of this programme; Halq Bank is among the most active participants, whose task is to disburse up to 30 per cent of the allocated amount. Per Halq Bank's management, in 2017 the bank has reached 50,000 households in the first quarter of 2017 and plans to cover the total of 1.4 million households in about 3 years.

89. As of July 2017, no detailed information was available on the composition of the current banks' portfolio in terms of lending to the agricultural sector. The average aggregate amount of loans extended annually to agriculture includes about UZS 2.4 trillion (US\$ 600 million) for the cotton and wheat sector; UZS 254 billion (US\$ 67 million) for livestock; UZS 217 billion (US\$ 57 million) to intensive horticulture, apiculture, poultry and fishery; UZS 329 billion (US\$ 87 million) to other sectors

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<sup>72</sup> Presidential Decree No. 2746 of 31 January 2017 "On measures for further expansion and simplification of the system of microcredits to small and private entrepreneurship."

<sup>73</sup> The minimum wage established from 1 October 2016 is UZS 149,775 (US\$ 39) per month.

<http://www.goldenpages.uz/zarplata/>

<sup>74</sup> Presidential Decree No. 2844 of 17 March 2017 "On measures for further simplification of the system of microcredits to subjects of entrepreneurship and broad strata of population."

<sup>75</sup> <http://www.cbu.uz/ru/press-tsentr/press-relizy/2017/03/81336/>.

<sup>76</sup> Meeting with CBU in May 2017.

<sup>77</sup> See: <http://www.cbu.uz/ru/press-tsentr/press-relizy/2017/01/76748/> and <http://nbu.uz/ru/press-center/news/imtiyozli-kredit/>.

of agriculture; and UZS 160 billion (US\$ 42 million) for strengthening the resource and technical base of farms.<sup>78</sup> Thus 70 percent of the funding for agriculture is allocated for the cotton and wheat sector.

90. According to ADB,<sup>79</sup> based on the analysis of 10 banks conducted as of year-end 2015, the share of agriculture in the total banks' portfolio was 8.2 per cent; excluding two banks specialized in lending to agriculture (Agrobank and Mikrokreditbank), it was only 4.3 per cent.

91. **Non-bank credit organizations (NBCO).** NBCOs include 29 microcredit organizations (MCO) and 46 pawnshops that work using only their own funds. Though between 2016 and 2017 the total assets of NBCOs grew by 47 per cent, the NBCO sector remains very small. The total assets of all NBCOs are about UZS 160 billion (US\$ 42 million) as of January 2017; their total capital is UZS 125.5 billion (US\$ 33 million), and the total outstanding portfolio is UZS 140 billion (US\$ 37 million).<sup>80</sup> Thus on average one NBCO has about US\$ 560,000 in assets and US\$ 493,000 in outstanding portfolio. As MCOs have no access to subsidized government funding or deposits and are very small and unable to benefit from economies of scale, it will be difficult for the ADMP to reach the Project beneficiaries through MCOs. It also appears that the Government has been focusing on the development of microcredit and loans to SMEs in Uzbekistan primarily through banks.

92. **Guarantees to small businesses.** In February 2017, the President of Uzbekistan established a Guarantee Fund for the development of small entrepreneurship with the purpose of "further improvement of business climate and deepening of market reforms, creation of more favourable conditions to accelerate the development of small businesses through expanding their access to credits provided by commercial banks for acquisition of modern technological equipment, development of production of competitive goods, demanded in domestic and export markets, and increasing on this basis of the role of small entrepreneurship in social and economic development of the country."<sup>81</sup>

93. The Guarantee Fund was established in the form of a joint stock company with the initial charter capital of UZS 100 billion (US\$ 26 million), with 50 per cent of the shares belonging to the State Committee of the Republic of Uzbekistan for Privatization, Demonopolization, and Development of Competition; 10 per cent – to the National Bank for Foreign Economic Activity; 5 per cent – to the Uzbekistan Banking Association; 2 per cent – to the Chamber of Commerce and Industry of the Republic of Uzbekistan; and the remaining 33 per cent – to 15 banks and 3 insurance companies holding from 0.5 to 5 per cent each.

94. The main tasks of the Guarantee Fund would be to assist SMEs by: a) providing guarantees to cover collateral required from commercial banks for issuing loans to finance new modern equipment etc.; b) offering advisory services on loan negotiations; c) offering technical assistance on establishing and expanding high-tech - innovative production; d) regular monitoring of the implementation process of projects for which collateral is provided, as well as monitoring of timely repayment of loans provided by commercial banks and repayment of obligations to the Guarantee Fund, provided as collateral; e) mobilising financial resources from IFI's, other foreign funds and banks for expanding the reach of the Guarantee Fund.

95. In August 2017, a new Presidential decree<sup>82</sup> replaced the Guarantee Fund with the State Fund for Support of Business Development (SFSBD). Under SFSBD the GOU intends to consolidate resources from other underutilized government financed instruments, such as the Guarantee Fund of Small Industrial Zones in Tashkent city and the Guarantee Fund for Small Business Development and accumulate a volume of US\$ 50 million from the first, and UZS 100 billion from the second. The MoF envisages (starting from 2018) an additional annual allocation from the State Budget of UZS 100 billion, to replenish the SFSBD on a regular basis. Supplementary resources will be coming

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<sup>78</sup> <http://www.cbu.uz/ru/press-tsentr/vystupleniya-doklady/2016/08/70187/>

<sup>79</sup> ADB. Horticulture Value Chain Development. Supplementary Document 16: Detailed Project Economic Analysis. Nov. 2016.

<sup>80</sup> <http://cbu.uz/ru/press-tsentr/press-relizy/2017/02/80463/>

<sup>81</sup> Presidential Decree No. No.PP-2768 of 10 February 2017 "On the creation of the guarantee fund for the development of small entrepreneurship."

<sup>82</sup> Presidential Decree No. PP-3225 of 17/8/2017. "On the creation of the State Fund for Support of Business Development.

from the CBU (part of the CBU's annual net profit – percentage to be determined) as well as loans and grants from IFIs. SFSBD will be investing its resources to yield interest and will be charging a 3% management fee on guarantees to cover expenses. SFSBD will be exempt from all types of taxes and contributions. In total, the decree secures adequate funding.

96. The initial capital (equity) of the SFSBD is to be contributed by the Fund for Reconstruction and Development of Uzbekistan (FRDU - US\$ 50 million), the SCPDDC (UZS 50 billion), the NBFEA (UZS 10 billion), the UBA, CCI and 18 banks (UZS 40 billion). The SFSBD is designed to operate as a semi-independent joint stock company to provide resources to commercial banks, for on-lending to SMEs. It will also provide them with guarantees to cover collateral requirements on loans to SMEs of up to 50% of the loan amount, but for not more than US\$ 500,000 or equivalent. The SFSBD will be assisting (among others) agriculture and rural entrepreneurship, focusing primarily on creating energy-efficient greenhouses; on developing the livestock, poultry, fish farming, rabbit breeding, beekeeping, viticulture and horticulture (including intensive gardens) sector; and in agro processing, on creating an infrastructure for storage of fruit and vegetable products and logistics centres associated with its transportation.

97. Good governance is being entrusted to the Council on Management of the SFSBD under the Cabinet of Ministers with members: a) the Deputy Prime Minister of the Republic of Uzbekistan (acting as Chairman of the Board); b) the First Deputy Chairman of the Central Bank of the Republic of Uzbekistan (acting as Deputy Chairman of the Board); c) the First Deputy Minister of Economy of the Republic of Uzbekistan (acting as Deputy Chairman of the Council); d) the Deputy Chairman of the Chamber of Commerce and Industry of the Republic of Uzbekistan; e) the Deputy Minister of Finance of the Republic of Uzbekistan; f) the Deputy Minister of Agriculture and Water Resources of the Republic of Uzbekistan; g) the Deputy Minister of Employment and Labour Relations of the Republic of Uzbekistan; h) the First Deputy Chairman of the State Committee of the Republic of Uzbekistan to promote privatized enterprises and the development of competition; i) the First Deputy Chairman of the State Committee of the Republic of Uzbekistan for Investments; j) the Chairman of the "Association Tadbirkor Ayol "; and k) the Head of the Sector on Assistance to Privatized Enterprises, Development of a Competitive Environment, Private Entrepreneurship and Small Business The Consolidated NAD of the Cabinet of Ministers of the Republic of Uzbekistan (acting as Secretary of the Council).

98. Management is to be delegated to the CEO and 18 staff members, that to date have not yet been appointed. The organizational structure of SFSBD (as defined in the decree) is outlined in the following organigram. SFSBD is expected to be staffed and fully operational in early 2018.

**Figure 2: Organigram of SFSBD**



## G. Uzbekistan: Country data sheet

<b>Land area (km2 thousand) 2012 1/</b>	425	<b>GNI per capita (US\$) 2012 1/</b>	1 700
<b>Total population (million) 2012 1/</b>	29.77	<b>GDP per capita growth (annual %) 2012 1/</b>	7
<b>Population density (people per km2) 2012 1/</b>	70	<b>Inflation, consumer prices (annual %) 2012 1/</b>	n/a
<b>Local currency</b> Uzbekistan Sum (UZS)		<b>Exchange rate: US\$ 1 = UZS</b>	
<b>Social Indicators</b>		<b>Economic Indicators</b>	
Population growth (annual %) 2012 1/	2	GDP (US\$ million) 2012 1/	51 183
Crude birth rate (per thousand people) 2012 1/	21	GDP growth (annual %) 1/	
Crude death rate (per thousand people) 2012 1/	5	2002	4.0
Infant mortality rate (per thousand live births) 2012 1/	38	2012	8.2
Life expectancy at birth (years) 2012 1/	68		
		Sectoral distribution of GDP 2012 1/	
Total labour force (million) 2012 1/	13.00	% agriculture	19
Female labour force as % of total 2012 1/	40	% industry	32
		% manufacturing	13
		% services	49
		Consumption 2012 1/	
		General government final consumption expenditure (as % of GDP)	
			23
		Household final consumption expenditure, etc. (as % of GDP)	
			60
		Gross domestic savings (as % of GDP)	
			17
		<b>Balance of Payments (US\$ million)</b>	
		Merchandise exports 2012 1/	11 210
		Merchandise imports 2012 1/	12 034
		Balance of merchandise trade	-824
		Current account balances (US\$ million)	
		before official transfers 2012 1/	n/a
		after official transfers 2012 1/	n/a
		Foreign direct investment, net 2012 1/	
			n/a
		<b>Government Finance</b>	
		Cash surplus/deficit (as % of GDP) 2012 1/	n/a
		Total expense (% of GDP) 2012 1/	n/a
		Present value of external debt (as % of GNI) 2012 1/	n/a
		Total debt service (% of GNI) 2012 1/	1
		Lending interest rate (%) 2012 1/	n/a
		Deposit interest rate (%) 2012 1/	n/a
<b>Education</b>			
School enrolment, primary (% gross) 2011 1/	93		
Adult illiteracy rate (% age 15 and above) 2012 1/	1		
<b>Nutrition</b>			
Daily calorie supply per capita	n/a		
Malnutrition prevalence, height for age (% of children under 5) 2012 1/	n/a		
Malnutrition prevalence, weight for age (% of children under 5) 2012 1/	n/a		
<b>Health</b>			
Health expenditure, total (as % of GDP) 2012 1/	6		
Physicians (per thousand people) 2012 1/	2		
Population using improved water sources (%) 2012 1/	87		
Population using adequate sanitation facilities (%) 2012 1/	100		
<b>Agriculture and Food</b>			
Food imports (% of merchandise imports) 2012 1/	n/a		
Fertilizer consumption (kilograms per ha of arable land) 2012 1/	204		
Food production index (2004-2006=100) 2012 1/	140		
Cereal yield (kg per ha) 2012 1/	4 496		
<b>Land Use</b>			
Arable land as % of land area 2012 1/	10		
Forest area as % of total land area 2012 1/	8		
Agricultural irrigated land as % of total agric. land 2012 1/	19		





## Appendix 2: Poverty, targeting and gender

### A. Poverty

1. **Country overview.** Uzbekistan achieved a significant progress on both economic growth and poverty reduction in the last decade. Between 2008 and 2012, the country's GDP grew at an average rate of 8.4% per annum. GDP per capita increased from US\$555 in 2005 to US\$2,222 in 2015. It is now a lower middle income country, with GDP per capita having risen from US\$555 in 2005 to US\$2,222 in 2015, at prevailing exchange rates<sup>83</sup>. GDP per capita in Purchasing Power Parity (PPP) terms is estimated to be US\$5,643 in 2015. Data suggests that the economic growth took a broad-based and inclusive path. While Uzbekistan's GDP growth per capita increased 1.4 times over 2005-2010, cash earnings per capita increased 2.7 times, average monthly wages 4.3 times, pensions 3.8 times, personal savings 4.9 times, and consumption expenditures per capita 2.6 times. Public investments in the social sectors and infrastructure development increased 2.5 times during the same period. The share of social sector expenditures in the budget increased from 49 per cent in 2005 to 60 per cent in 2010<sup>84</sup>.

2. Poverty declined from 27.5% in 2001 to 14% in 2015. Major factors contributed to the poverty reduction are: rapid economic growth, creation of new small businesses and employment, public investments in education, health and infrastructure, increases in public sector salaries, and increased remittances<sup>85</sup>. According to the data of Uzbekistan Household Budget Survey (HBS), households with a greater number of dependents (three or more children) have a higher risk of being in poverty. Education level of the household head is another important factor: poverty rates are higher among the households whose heads do not have specialized or vocational education<sup>86</sup>.

3. **Human development.** Uzbekistan made an important achievement in human development – boosting its HDI score from 0.594 in 2000 to 0.701 in 2015. It now ranks 105 out of the 188 countries in the list of UNDP's Human Development Index (HDI)<sup>87</sup>. Although its HDI score of 0.701 is higher than some neighbouring countries, it still remains much lower than the average of Europe and Central Asia (0.756). Uzbekistan fares rather poorly in terms of key health indicators (life expectancy at birth, infant mortality rate and under-five mortality rate). Child malnutrition is prevalent as one out of every five children under five years old are stunted.

**Table 1: Key Social Indicators of Selected ECA Countries**

	HDI score	HDI Ranking	Life expectancy at birth (years)	Infant mortality rate (per 1,000 live births)	Under-five mortality rate (of 1,000 live births)	Mean Years of Schooling (years)	Child Malnutrition (% of stunted children under five)
Uzbekistan	0.701	105	69.4	33.9	39.1	12.0	19.6
Kyrgyzstan	0.664	120	70.8	19.0	21.3	10.4	12.9
Tajikistan	0.627	129	69.6	38.5	44.8	10.8	26.8
<b>ECA</b>	<b>0.756</b>	<b>-</b>	<b>72.6</b>	<b>18.2</b>	<b>20.5</b>	<b>10.3</b>	<b>12.5</b>

Source: UNDP, Human Development Report 2016

4. **Rural poverty.** In 2015, poverty in rural area accounted for 17% compared to 11% among the urban population<sup>88</sup>. Three quarters of the people living below the poverty line are rural inhabitants. Low productivity of agriculture sector, which employs 27.2% of the total workforce (2012), is one of the

<sup>83</sup> IFAD (2017), Uzbekistan COSOP

<sup>84</sup> ADB (2012), Country Partnership Strategy: Uzbekistan 2012-2016, Poverty Analysis.

<sup>85</sup> ADB (2016), Report and Recommendation of the President to the Board of Directors on Horticulture Value Chain Development Project, Supplementary Document 15: Detailed Sector Assessment - Agriculture, Natural Resources, and Rural Development

<sup>86</sup> ADB (2012)

<sup>87</sup> UNDP (2016), *Human Development Report 2016: Human Development for Everyone*. Most data is from 2015.

<sup>88</sup> Center for Economic Research (2015), Millennium Development Goals Report: UZBEKISTAN 2015

reasons of higher than average poverty in rural areas. Poor families in rural areas are characterised by small land holdings, meagre assets, including livestock, and limited off-farm income opportunities. Internal and international labour migration is a common coping strategy of poor rural households.

**Geographic variations of poverty.** Uzbekistan is divided into 12 regions, the autonomous Republic of Karakalpakstan and the city of Tashkent. According to State Statistics Committee data, the distribution by these areas of the percentage of the population which fell below poverty line in 2012 was, in order of ascending percentage: Tashkent City 2.1%; Fergana 9.6%; Tashkent Region 10.3%; Bukhara 12.2%; Andijan 11.5%; Samarkand 12.9%; Navoi 16.6%; Jizzak 18.7%; Khorezm 17.2%; Syrdarya 20.3%; Namangan 17.4%; Surkhandarya 22.6%; Kashkadarya 24.9%; and the Republic of Karakalpakstan 32.5%<sup>89</sup>. Eight regions, including Jizzak, Kashkadarya, Navoi, Namangan, Sirdarya, Surkhandarya, Khorezm and the Republic of Karakalpakstan, recorded higher than average poverty rates.

5. **Food security.** There has been a significant improvement of the diet and nutrition since independence. Productivity improvements in the agricultural sector have resulted in increase in the consumption of meat (130% increase since 2006), milk and dairy products (160%), vegetable (more than 200%) and fruits (almost 400%)<sup>90</sup>. Levels of Uzbekistan's production of vegetables, potatoes and fruits are more than adequate on a per capita basis: 300 kg of vegetables, 75 kg of potatoes and 44kg of grapes. However, it is pointed out that production of meat and dairy products did not meet the adequate level of per capita consumption, recommended by the Ministry of Health (46.1 kg of meat, 156.3 kg of milk and milk products, and 295 eggs). According to an UNDP report, average person's diet in Uzbekistan is skewed towards grains although the situation is reported to be improving<sup>91</sup>. The report calls for measures to stimulate the consolidation of the livestock sector, improve productivity and expand the fodder production base.

## B. Gender and Youth Issues

6. The Welfare Improvement Strategy (WIS) of Uzbekistan (2012–2015) articulated that gender should be considered in welfare improvement strategies, and reiterated the country's commitment to addressing gender in policies and programs. However, indicators of human development suggest that progress toward gender equality in Uzbekistan has been slow. Value of Uzbekistan's Gender Development Index is 0.946, indicating gender-based disparities in human development.

**Table 2: Gender Disparities in Human Development in Uzbekistan**

	HDI Value	Live expectancy at birth	Expected years of schooling (years)	Mean years of schooling (years)	Estimated gross national income per capita (2011 PPP US\$)
Women	0.672	71.9	11.8	11.8	3,891
Men	0.711	65.1	12.2	12.3	7,668
Total	0.701	69.4	12.2	12.0	5,748

Source: UNDP, Human Development Report 2016

7. While women play an important role in agriculture as women make up the majority of land users and workers of *dekhan* farms. However, gender-based imbalances exist in control over productive resources. Women's access to land is limited and mostly through the household. Women benefited substantially less than men from privatization of agricultural production and land allocation schemes<sup>92</sup>. In addition, cultural norms and traditions lead to men's control over land despite the legal framework that supports equal rights in property ownership. Leasehold contracts and household plots are usually in the name of the male head of family, giving much constraint to women's access to formal credit. Land rights pass to sons and, in the event of divorce, men are more likely to retain land.

<sup>89</sup> Data of State Statistics Committee, cited in Center for Economic Research (2015)

<sup>90</sup> ADB (2016)

<sup>91</sup> 'Food Security in Uzbekistan', cited in ADB (2016).

<sup>92</sup> ADB (2014), Uzbekistan: Country Gender Assessment

8. Women are traditionally engaged in agriculture as cheap labour in production and other tasks on the value chains (harvesting, processing). In *dekhan* farms, which relies on the family labour, women of the household are an integral part of the production but their roles in farm management and decision makings are limited. Women's salaries are only 82% of men's salaries in the agriculture sector. Out of a total of 160,752 registered farms in 2016, only about 4,500 farms are registered under women's name<sup>93</sup>. Women's involvement in water management is also limited, and their representation in Water Consumer Associations (WCAs) appears marginal<sup>94</sup>.

9. Rural women have fewer opportunities to be employed in non-agricultural work as occupations which are considered more suitable for women, such as teaching and primary health care, are limited in rural areas. With their labour contribution for livestock and farming, rural women have higher workload but are challenged by inadequate social support, such as affordable child care. This gives a rise of a form of officially recognized work arrangement, called 'Home-Based Work'. The system of home-based work was introduced by a presidential decree in 2006. Home-based work is considered a form of formal employment, and employees are provided with a recorded work history and access to unemployment and pension benefits. Because of access to such formal social services and flexibility of labour inputs, that allows women to dedicate their time to household duties as well, home-based work is popular among rural women. State-promoted agricultural activities, such as sericulture, takes advantage of this system and encourages rural women's participation in production.

10. Women also face challenges in managing and expanding small and micro businesses. Although no sex-aggregated data is available for the registered enterprises, it has been observed that female entrepreneurs have less access to start-up capital and financial services. Of the total volume of enterprise loans in the country, only about 11 percent was extended to women<sup>95</sup>. Although the share is still small, this is a 25.5 percent increase from the previous year, indicating a positive trend in women's participation in enterprise development and access to credit.

### Key institutions for women's empowerment

11. **Women's Committee of Uzbekistan.** The Women's Committee is the main organization which coordinates women's affairs at all levels. Its mission focuses on: developing and implementing state policies on women's rights; improving the social and economic status of women; and ensuring women's participation in reforming and modernizing the country. The Women's Committee has the status of NGO, but plays a quasi-governmental role through its close links with the Government structure. The Women's Committee is chaired by the deputy prime minister (an appointed position reserved for a woman). The Women's Committee has branches in all 14 regional administrations and 219 districts or cities, and which are led by women who hold the office of deputy *Hakim* (head of regional administration). In addition, since 2004 each *mahalla*, a local community-based organization, has an advisory position on religious, spiritual, and moral education that is reserved for a woman and is partly funded by the Women's Committee<sup>96</sup>. There are 8,348 such female advisors in the country.

12. **Business Women's Association of Uzbekistan (BWAU).** Established after independence in 1991, the BWAU is the most important agency promoting female entrepreneurs in the country. Its membership comprises about 14,000 female business leaders. The BWAU has representatives in all provinces/regions and 90 districts. The main activity of the BWAU is to assist female entrepreneurs with strengthening their business knowledge and skills, and exploring market opportunities. For this purpose, the BWAU and its regional and district branch offices organize training workshops and seminars. It also provides training to unemployed women to help them establish their own independent businesses. It is also involved in training women farmers on gender awareness, leadership and farm business development. BWAU also works with externally financed projects, including those financed by the World Bank, USAID and ADB.

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<sup>93</sup> ADB (2016)

<sup>94</sup> ADB (2014) cites a 2006 study of WUAs (presently WCAs) in Fergana Valley, which found that only three of 40 WUA members were women, and there was only one woman among the seven WUA council and committee members.

<sup>95</sup> April 2017 figure according to the Central Bank of Uzbekistan (<http://www.cbu.uz/ru/press-tsentr/press-relizy/2017/05/84843/>)

<sup>96</sup> ADB (2014)

## Youth Unemployment

13. More than two-thirds of the population are under 30 years old. With an annual population growth rate of 1.36%, Uzbekistan is a young nation where a large number of men and women annually enters into the labour market. However, jobs for the youth are limited particularly in rural areas. According to an estimate, nearly 18% of those aged 18-24 years old are unemployed in 2016<sup>97</sup>. Unemployment among young women is higher at 19.4 percent. Many males seek employment opportunities outside the country, especially in Russia and Kazakhstan, with some important social consequences, including an increase in the number of female-headed households.

## C. Target Groups

14. **Geographical target.** The Project will be implemented in Fergana Valley, in the regions of Andijan, Fergana and Namangan. According to the official statistics for 2017, the total population of the three regions is 9,179,700 persons, that accounts for about 29% of the total population in the country (2,962,500 persons for Andijan; 3,564,800 for Fergana; and 2,642,500 for Namangan)<sup>98</sup>. Detailed demographic information is not available except for Namangan where population and numbers of villages and *mahallas* were provided to the design team.

**Table 3: Population by District - Namangan Region**

District	Population as of January 1, 2017 ('000 persons)	Number of rural villages	Number of <i>mahallas</i>
Namangan city	588.6	-	102
Mingbuloq	118.5	50	40
Kosonsoy	195.9	42	60
Namangan	168.3	37	53
Norin	154.9	35	57
Pop	207.9	47	77
Toraqorgon	212.0	26	68
Uychi	200.1	39	56
Uchqorgon	162.4	43	65
Chortoq	187.4	19	52
Chust	251.0	24	70
Yangiqorgon	205.4	29	71
<b>Total Namangan</b>	<b>2,652.4</b>	<b>391</b>	<b>771</b>

Source: State statistical office, Namangan Region

15. COSOP highlights that Fergana Valley (Fergana, Andijan and Namangan) are severally challenged by very high population density, and Namangan registers the second lowest country GDP per capita. Women make up about a half of the population share with a relatively high incidence of female-headed households (18% of the total). Around 20% of youth are unemployed<sup>99</sup>. Although only in Namangan the poverty rate is higher than national average, high population density in the Fergana Valley means that the absolute number of poor households is large.

16. **Target groups.** ADMP's main target groups are: (i) rural low-income households of *dekhan* farms, who strive to increase income from agriculture through active participation in the Project supported value chains; (ii) small private farmers engaged/interested in horticulture and livestock (with farm size of up to 5 ha); (iii) agribusinesses with existing or potential linkages with (i) and (ii); and (iv) rural youth in the Project regions. Special attention will be paid to ensure the participation of female-headed households both in *dekhan* and private farmers, as well as to reach out female youth. Characteristics of the Project's primary target groups (*dekhan* and small private farmers defined by the Project as smallholder producers or small-scale farmers) and youth are presented below.

17. **Dekhan farmers** are the operators of *dekhan* farms, which are legally registered, small farming enterprises governed by the Law on *Dekhan* Farms (1998). *Dekhan* farmers cultivate plots, usually

<sup>97</sup> World Bank data based on an ILO estimate (<http://data.worldbank.org/indicator/SL.UEM.1524.ZS>)

<sup>98</sup> <http://www.stat.uz/uploads/ekonom/demograf/doimiy%20aholi%20soni.xls>

<sup>99</sup> IFAD (2017)

near their homestead, through life-long leaseholds with inheritable possession rights. The maximum plot size is 0.35 ha on irrigated land and 05 ha on rain-fed land. In addition they have access to up to 1 ha of land on steppe and desert zones with rain-fed pastures<sup>100</sup>. *Dekhan* farms were originally intended to provide a contribution to the needs of the households' own basic food requirement and encourage an element of self-sufficiency. *Dekhan* farms are not subject to Government's control over production, and increasingly producing for the market. The total number of *dekhan* farms is estimated at 4.7 million, but no regional breakdown is available. Production on *dekhan* farms is largely based on the household labour unit, with all adult family members contributing at different phases of production. Surplus products are sold on the local or regional market.

18. The majority of *dekhan* farmers are engaged in small volumes of production and selling of agricultural produce using household labour. Despite being small and occupying only 11 per cent of total cultivated land, they play a major role in terms of agriculture production, particularly in horticulture and livestock. According to available statistics, they account for almost 60 per cent of agricultural output, including 40 per cent of crop<sup>101</sup>. The share of *dekhan* farms in the livestock production is over 90% (96 percent of milk, 95 percent of meat and 55 percent of eggs). Agriculture employment, however, contributes only less than 10% of the total family revenue on average, with majority coming from off-farm employment. Livestock production in *dekhan* farms plays a significant social role, as it is an important source of income and food for the rural families.

19. Although agriculture's contribution to family income is estimated to be 25-30% of the total, cash income from the sale of horticultural crops or livestock products is still important for *dekhan* farm families, who tend to be poorer<sup>102</sup>. Despite their reliance on family labour and with little mechanization, *dekhan* farm production is not necessarily low input. *Dekhan* farmers often use advanced technologies, including drip irrigation, plastic tunnels and green houses. Another advantage of *dekhan* farms is that many varieties of fruit and vegetables they grow are heritage varieties that appeal to local preferences, compared to modern varieties grown in private farms<sup>103</sup>. Women's involvement in horticulture and livestock production seems high among *dekhan* farm families because of the vicinity of those production activities to their houses.

20. **Private farmers** are independent legal entities with a right to hire and eligible for land allocation. As the table below indicates, average sizes of the horticultural farms are relatively small. This is mostly because of a series of policies undertaken by the Ministry of Agriculture and Water Resources to reduce the farm size. The latest policy (2016) primarily targeted the horticulture sector, and set the maximum size of any farm involved in production of vegetables, fruits and grapes at 5 ha, while combined farms designated for use as grain and vegetable farms was set at 10 to 15 ha. Those farms, which were growing vegetables, fruits or grapes, and also had their own storage or processing facility can have up to 10 ha<sup>104</sup>.

**Table 4: Number of private farmers by type**

Region	Vegetables & Melon		Vegetables & Wheat		Horticulture & Grape	
	Number	Average area (ha)	Number	Average area (ha)	Number	Average area (ha)
Andijan	915	3.9	574	9.8	7,737	2.0
Fergana	646	3.7	103	10.0	11,005	3.2
Namangan	229	4.6	859	7.5	8,767	3.0

Source: state statistical data, quoted in ADB (2015)

21. **Agribusinesses with existing and potential linkages with *dekhan* and small private farmers.** The Project will target small- and medium-sized agricultural enterprises in the Project area, which commit to sourcing the products from *dekhan* and small private farmers. Termed as 'missing

<sup>100</sup> World Bank (2013), Uzbekistan: Strengthening the Horticulture Value Chain

<sup>101</sup> IFAD (2015), Dairy Value Chains Development Project, Final Design Report, Appendix 2 (Poverty, targeting and gender)

<sup>102</sup> World Bank (2013)

<sup>103</sup> Ibid.

<sup>104</sup> ADB (2016)

middle', these private enterprises need loans larger than those available under the Government programmes that focus on microbusinesses but smaller than those provided under the ongoing projects of the international financing institutions. They are registered companies, and would fall under the Uzbekistan's official categories of 'small' (10-40 employees) or 'medium' (40-100 employees) enterprises. Agribusinesses of this scale are often 'home-grown' with strong ties with the local communities and possess good knowledge of agricultural potentials of the area. In view of the scale of their operations, these enterprises would be interested in sourcing products from small producers. Registered large farmers are eligible for the Project support as agribusinesses if their operations, current or planned, as value chain operators (such as processing).

22. **Rural youth.** The Project will support rural youth (both women and men), defined as those not older than 30 years old<sup>105</sup>, who are interested in starting up or expanding businesses related to agricultural value chains. This category of beneficiaries would include: fresh graduates of agricultural colleges and other vocational training institutes; and unemployed or underemployed youth, including those helping family farms or aspiring to manage own enterprises. As in the agribusiness category mentioned above, the Project will target those youth who are in need of larger amounts of loans than those currently available under the Government programme in support of college graduates.

#### D. Targeting strategy

23. In order to support its primary target groups of *dekhan* and small private farmers, the ADMP will offer the agricultural enterprises, which source products from such small-scale farmers an opportunity to strength and expand their businesses by enabling the enterprises' access to credit and technical assistance. Such approach will promote tangible economic gains for both businesses and their suppliers, and enhance sustainability of the results.

24. The ADMP comprises three investment components: Component 1 – Inclusive Value Chains Development; Component 2 – Inclusive Rural Finance; and Component 3 – Climate-resilient Rural Infrastructure. Key elements of the ADMP's targeting strategy are presented below.

25. **Component 1 (Inclusive Value Chains Development).** The Project will target the sub-sectors that are particularly relevant and beneficial for smallholder producers, such as apiculture, sericulture, fisheries, small-ruminants, as well as vegetables and fruits. The component will promote demand-based value chains development in these sub-sectors by identifying and supporting selected enterprises, which are eligible for Project support on technical assistance, as well as access to credit under Component 2.

26. The most important element of the selection criteria of these enterprises, called Leading Entities (LEs), will be existing and potential linkages with the Project's main target groups of *dekhan* farms and small farmers. This backward linkages of key players of value chains will be assessed as part of Value Chains Mapping Exercises, and be confirmed when the LEs develop Value Chain Development Plans (VCDP or Roadmaps). LEs' access to credit from PFIs is subject to the quality of VCDP, which is assessed in light of competitiveness and inclusiveness of the business with the latter being evidenced by a plan on the engagement of *dekhan* and small private farmers (number and location). At least 30% of its suppliers (the target group farmers) will need to be women for an LE to receive the Project support. Final selection will be made by a panel of external persons (five to seven members), including those from the private sector, industry associations, and relevant projects with good track records for supporting value chain development.

27. LEs will consult with *mahallas* (neighbourhood community organizations) in the existing and potential areas to source agricultural produce for the identification of farmers. *Mahallas* have intimate knowledge of all households in their jurisdiction and play important roles in public affairs, including supporting disadvantaged families, hence are well positioned to identify the Project's target households. The Project will also provide support to *mahallas* in their efforts to organize public meetings and raise awareness of the Project at the community level. Deputy *mahalla* chairperson,

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<sup>105</sup> This follows the country's definition of youth as per the Youth Policy Law (1991).

who is always a woman, will be included in such trainings and tasked to pay attention to women, including those from poor households and heads of families. A Social Mobilizer will be engaged to guide the *mahalla* leadership's efforts for awareness raising and engagement with agribusinesses, and to ensure the Project benefits reach its primary target groups (*dekhan* and small private farmers).

28. While technical training to *dekhan* and small private farmers will be the primary responsibility of the LEs, other small-scale farmers in the locality will be also entitled to receive training on farm technologies and improved animal husbandry practices through participation in Farmers Field Schools (FFSs) or demonstration plots with a view to strengthen their capacity for their future participation in the value chains as suppliers. The farmer trainees will be identified by the *mahallas*, and at least 30% of them will be women.

29. The component, on a selective basis, will also facilitate LEs' access to business advisory services related to their efforts to address social and environmental issues. Female leadership promotion and youth employment will be among the key topics for which advisory services will be provided.

30. **Component 2 (Inclusive Rural Finance).** As mentioned above, recipients of loans from PFIs have to satisfy criteria on targeting and gender mainstreaming. In addition, a special credit line will be created for youth with a view to promoting their engagement in horticulture/livestock value chains and facilitating their start-ups. It is proposed that about 1,000 youth (500 women, 500 men) will receive loans in the amounts between US\$ 5,000-35,000 if they satisfy a set of predetermined criteria. The Project will publicly announce the opportunity through advertisements in mass media, as well as direct contacts with agricultural colleges, the Ministry of Employment and Labour Relations' regional and district branches, and other resource organizations and individuals. The applicants would need to have residence in the Project's target regions. The interested candidates will be requested to prepare a simple business proposal, and those with strong proposals will be given an opportunity to receive training and mentoring through which they strengthen and finalize the business plan for submission to PFIs. The Business Women's Association will be requested to support the identification and training of female youth.

31. **Component 3 (Climate-resilient Rural Infrastructure).** This component will support rehabilitation of selected irrigation schemes in the target Regions. Selection of the schemes will be based on a set of eligibility criteria for pre-qualification and final selection. Pre-selection will take into account such factors as direct linkage with the horticulture activities selected for support under Component 1, commitment by the proponents to invest from their own resources, and proposal of a feasible and sustainable procedure for operation and maintenance (O&M). Pre-qualified schemes will be then ranked according to a further set of indicators, including number of small-scale farmers as beneficiaries. Support to Water User Associations will include measures to promote women's participation WUAs and female leadership training.

#### **E. Gender mainstreaming actions**

32. The ADMP will mainstream gender through implementation of a Gender Action Plan (GAP) specifically designed for the Project. The GAP will be based on the understandings that women play an important role in horticulture and livestock value chains, but their equal participation in the Project needs to be facilitated through a set of specific measures. The Project's GAP therefore will focus on activities and outputs which ensure women's equal participation, developing their capacities, building gender awareness among all stakeholders and creating opportunities for women's economic empowerment. The Project will engage a full-time staff in PMU in charge of gender and youth related issues. It also coordinate closely with resource institutions and individuals, such as Women's Committee, *mahalla* deputy chairpersons, gender focal points of other relevant projects. All key GAP actions are reflected in the Project costing.

33. Salient features of the GAP are presented below, which will be further refined and strengthened at the onset of the Project:

- **Awareness building:** the Project will communicate the importance of gender mainstreaming and women's economic empowerment through training and awareness building to PMU staff and Project stakeholders, including PFIs. The Gender and Youth Specialist of the PMU will ensure all communication and training materials reflect the Project's approach to gender mainstreaming. S/he will prepare and organize gender training targeting key stakeholders;
- **Selection of technologies:** selection of topics for farmers training will take into consideration gender aspects, and include crops and technologies which can be adopted by women and/or reduce women's labour inputs (such as drip irrigation). Special attention will be paid to female heads of households who may suffer from labour shortage;
- **Creating conducive environments for female farmers:** attention will be paid to ensure that female farmers are trained in the environments, which are socially and physically acceptable. Female farmers will be encouraged to be master trainers for FFSs and demonstration plots;
- **Gender targets:** the Project sets specific targets for women's participation as follows: at least 20% of LEs that receive loans under Sub-component 2.2 will be headed by women (owners or managers); at least 30% of suppliers to LEs will be women (the products are under the primary responsibility of women); at least 30% of farmer trainees will be women; at least 30% of *mahalla* leaders invited to training will be women; and at least 50% of youth to receive loans under Sub-component 2.3 will be women. The Project MIS will incorporate these indicators to monitor the performance, and the PMU will take appropriate actions in case of serious under performance;
- **Support to female business leadership:** the Project will nurture female leadership in agribusiness community by providing study tours and specialised training (provided by Business Women's Association); and
- **Project M&E:** sex-disaggregated baseline data will be collected wherever possible on gender-related targets in the Logframe.



## Annex 1. Gender Checklist

Key Issue	Design Response
1. The project design report contains – and programme 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 programme activity from the gender perspective to address any unintentional barriers to women’s participation.	Gender-informed aspects of rural poverty were analyzed. The sub-sectors selected for the Project support are all actively participated by female <i>dekhan</i> and small farmers, or have strong potential for their engagement.
2. The project design report articulates – or the programme implements – actions with aim to:  5 Expand women’s economic empowerment through access to and control over productive and household assets;	The ADMP supports female <i>dekhan</i> and small farmers’ economic empowerment through participation in value chains. This will be facilitated by requiring LEs to include women (at least 30%) among their suppliers.
6 Strengthen women’s decision-making role in the household and community, and their representation in membership and leadership of local institutions;	The project will facilitate female leadership in agricultural enterprises by mentoring by a qualified service provider (Business Women’s Association) and providing opportunities for study tours.
7 Achieve a reduced workload and an equitable workload balance between women and men.	The Project will support adoption of drip irrigation, green house and other technologies that can be incorporated on the household plots ( <i>dekhan</i> farms) near the houses which will be desirable for women.
3. The project design report includes one paragraph in the targeting section that explains what the programme will deliver from a gender perspective.	The main text of the PDR incorporates a summary of Appendix 2 and articulates the ADMP’s gender mainstreaming actions.
4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant programme components.	The design report outlines key elements for a Gender Action Plan (GAP) which will be finalised at the onset of the Project implementation.
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:	
5.1 <i>Allocating adequate human and financial resources to implement the gender strategy</i>	The Project cost includes items related to gender actions, including Gender Specialist in the PMU.
5.2 <i>Ensuring and supporting women’s active participation in project-related activities, decision-making bodies and committees, including setting specific</i>	Women’s active participation in Project-related activities and decision making bodies is ensured through various measures related to the preparation of Value Chain Strategic Investment Plans and training to farmers. Project Implementation Manual will be developed to

Key Issue	Design Response
<i>targets for participation</i>	provide details of those specific actions. Gender-related targets include 30% of farmers supplying to LEs need to be women; 30% of the participants of farmer trainings will be women; and 50% of the youth who will receive credit under a specialist window will be women.
5.3 <i>Ensuring that project/project management arrangements (composition of the programme management unit/programme coordination unit, programme terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns</i>	The PMU includes a Gender and Youth Specialist who will be responsible for all gender mainstreaming actions in the project. In addition, training for other PMU staff, LEs and other project stakeholders will incorporate gender aspects.
5.4 <i>Ensuring direct project/project outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited</i>	Farmer training will be organized at the community level and will not pose mobility challenges for women participants.
5.5 <i>Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue</i>	The Project will actively seek partnership with government and development partners active on gender mainstreaming in rural livelihood activities through knowledge sharing events. Such partners include Women's Committee and their representations at regional and district levels.
6. The project's logical framework, M&E, MIS and learning systems specify in design – and programme M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.	The Project will incorporate a gender-sensitive M&E system, which tracks gender-disaggregated data and information. TORs of baseline, mid-term and end line studies will ensure inclusion of gender-related information and data.

## Annex 2. Targeting Checklist

Key issue	Design response
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)?	ADMP's primary target group are <i>dekhan</i> farms and small private farmers (with less than 5 ha of land), who are resource poor but will benefit from participation in value chains. Female-headed households will be included.
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?)	Sub-groups within the broader target group are defined and their socio-economic and livelihood characteristics are presented. Special attention is paid to poor women, including the heads of families, and unemployed youth.
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?)	Ongoing HSP has demonstrated interest by small-scale farmers, including <i>dekhan</i> farms, to participate actively in value chains development.
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:	
<i>4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based programmes or programmes, geographic areas (and within these, communities) with high concentrations of poor people</i>	The ADMP will target the Fergana Valley, which includes three regions. The area is characterized with high population density and pockets of poverty but strong agricultural potential, and identified in the COSOP as the main target area.
<i>4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households</i>	The Project only selects those enterprises which are committed to working with small-scale farmers.
<i>4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups</i>	The ADMP selects the sub-sectors which are particularly relevant and beneficial to small-scale farmers, such as sericulture, fisheries, apiculture and small-ruminants. Loans to LEs are set between US\$10,000 and US\$500,000, which will serve 'missing-middle' which are underserved by the ongoing Government programme or IFI supported projects.
<i>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</i>	The Project will work with <i>mahallas</i> (community organizations), which are tasked to facilitate the implementation of public interventions at the community level. Although they are not part of the formal local administration, each <i>mahalla</i> has a leadership/governing structure with democratically elected representatives. They have a track record of facilitating participation and inclusion of disadvantaged members of the society.
<i>4.5 Enabling measures – to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality</i>	IFAD has established strong collaboration and communications with the Ministry of Agriculture and Water Resources (MAWR) on approach to

Key issue	Design response
<i>and women's empowerment, including policy dialogue, awareness-raising and capacity-building</i>	rural poverty reduction and gender mainstreaming through the HSP and DVCDP. The ADMP will build on this asset and continue to guide and engage the MAWR.
<i>4.6 Attention to procedural measures- that could militate against participation by the intended target groups</i>	No procedural constraints for poor households, women, youth and poor's access to project opportunities is envisaged.

## Appendix 3: Country performance and lessons learned

### IFAD Programme in Uzbekistan

- 1. Programme overview.** IFAD's entry point and comparative advantage in Uzbekistan derive from its experience in rural development and poverty reduction which has been acquired in neighbouring and other countries that face similar constraints. IFAD's experience in the following areas are particularly relevant in the country context: (i) public and private partnerships in support of smallholders; (ii) development of inclusive value chains with strategic combination of investment and technical assistance; (iii) targeting women and youth; (iv) results-based project M&E; and (v) knowledge management.
2. According to the established agreements with the Government and in line with the continuous dialogue between IFAD and the Government, the IFAD Country Programme is expected to: (i) support farmers to move towards an improved and sustainable agriculture/livestock production that takes advantage of existing and emerging markets in order to increase their employment, assets base and production incomes; (ii) seek to minimise smallholder production risks through comprehensive and systematic modern technology transfer, support to key elements of profitable agricultural value chains, and the establishment of appropriate, accessible asset-building financing channels; (iii) take into account lessons learned from ongoing development projects, including the Horticultural Support Project (HSP) and the starting Dairy Value Chains Development Project (DVCDP); and (iv) focus on sectors and geographical areas where smaller farmers predominate, such as the livestock and the horticultural subsectors, while placing emphasis, over time, to achieve a long term impact, and scaling-up/ replication of successful results derived from implementation experience.
3. As a result, IFAD ongoing operations consist of innovative projects that focus on value chain development and the competitiveness of enterprises, food security and agricultural climate-change impact mitigation/adaptation, and overall development of entrepreneurial, organisational and technical capacities of target groups. Both projects place a strong emphasis on implementation support, knowledge management (KM) and learning, with a view to drawing experiences for replication and scaling up.
- 4. Ongoing projects.** IFAD's investment operation in Uzbekistan started in 2013 with the Horticultural Support Project (HSP). The total cost of HSP is US\$ 31.7 million, of which IFAD financing amounts to US\$ 10.6 million (a loan in the amount of US\$ 9.6 million, and a grant of US\$ 1.0). A Spanish financed loan accounts for US\$ 11.4 million. The HSP targets the Surkhandarya region and aims to increase the incomes and assets of smallholder farmers, processors and service providers in the horticultural subsector. To achieve this, the project promotes the use of modern, efficient farming techniques. HSP also works to improve access to domestic and international markets, and to stimulate investments in productive assets for horticulture. The project interventions include upgrading of local cultivation through a central nursery that imports, tests and propagates modern seed varieties and root stock for sale in the horticultural value chain.
5. The HSP also intends to modernize 10 to 15 private agri-firms engaged in horticultural production and processing, and is providing small-scale farmers in the horticulture sector with affordable financing, technical assistance and training. In addition, it seeks to improve rural infrastructure, notably by developing a more advanced irrigation network. As of the time of COSOP preparation, the HSP has reached out to 1,503 households, provided training on crop production and technologies for 1,322 people (8 percent women), and given loans for 304 *dekhans* and private farmers for a total value of around USD 8 million. Recent data suggests that women's share has increased, and for some PFIs has reached 18%.
- 6.** The second investment project, Dairy Value Chains Development Project (DVCDP), became effective in 2017. Of the total cost of US\$ 39.4 million, IFAD financing is US\$ 24.6 million, which comprises a US\$ 23.9 million loan and a US\$ 0.7 million grant. The 6-year project aims to improve the

livelihoods of rural women and men – primarily in the regions of Jizzakh and Kashkadarya – who operate as milk producers, and processing and market entrepreneurs. It also seeks to create decent employment opportunities along the dairy value chain. The development objectives of the project include increasing productivity, competitiveness, commercial farmer linkages and market access of smallholder dairy farms.

7. **Performance.** Neither of the two projects has reached the implementation stage whereby their performance can be assessed with evidence and results on the ground. Dialogue with the Government during the preparation of the ADMP, however, indicates that IFAD operations are positively recognized. The Government views IFAD as a specialized rural development agency that has the skill to develop and apply innovative approach to the economic and technical needs of rural populations, thus increasing the pace of rural transformation that is currently underway. The current IFAD interventions, in support of production using value chain approach and targeting *dekhan* farmers and small private farmers, are seen as innovative in the country context.

8. There is also evidence that modestly-scaled IFAD interventions to pioneer new methods, approaches and engagement tools are already serving as a model for other investment by Government, development partners and the private sector. The World Bank, the Asian Development Bank and the European Commission are currently implementing or planning to implement major interventions in the horticultural and dairy sub-sectors, in collaboration with the GOU. The Government has encouraged IFAD to continue this key role. Implementation experience also suggests the importance of knowledge management. The Government is receptive to changes in the development of its rural development strategy and planning, particularly when new approaches and modalities have been successfully field tested. It is noted, for example, that there is now greater recognition of the positive role that the smallest-scale *dekhan* farmers can and are playing in the development of commercially viable export industries, following the successful implementation of this model within the HSP.

## **COSOP**

9. Uzbekistan's Country Strategic Opportunities Programme (COSOP) for the period of 2016-2021 was approved by the board in April 2017. The Programme will be funded by two PBAS allocations (2016-2018 and 2019-2021) for about \$75 million. IFAD is expected to directly support the income development of about 45,000 households during this COSOP, including the creation of 5,000 rural jobs, provide training for more than 10,000 beneficiaries, and support the construction/rehabilitation of infrastructure.

10. **Goal and outcomes.** The COSOP sets the over-arching Goal for the IFAD programme in the country as "to enable sustainable income growth for rural people through viable small-scale agricultural production and rural enterprise systems". Accordingly, the outcome of the IFAD interventions would be "viable, environmentally sustainable Production to Market Systems for small-scale agricultural producers and associated rural enterprises". The COSOP emphasizes particular focus to the empowerment of *dekhan* farmers, small-scale private farmers, including women and women-headed households, and youth.

11. The COSOP Goal and the Outcome are both consistent with the IFAD Strategic Framework 2016-2025. The Strategic Objectives (SO) of this COSOP are:

- SO1: Improve rural people's capacity and ability to benefit from high value agricultural systems;
- SO2: Increase the productive assets and competitiveness of smaller-scale productive entities in rural areas to enhance their market participation; and,
- SO3: Enhance small-scale producer's ability to make environmentally sustainable use of natural resources and their proficiency in adapting to climatic variability and shocks affecting their economic activities.

12. **Target groups.** The RB-COSOP will target the rural households of the Eastern geographic area of the Fergana Valley, comprising the Regions of Fergana, Andijan and Namangan. These are severely challenged by very high population density (equalling to one third of Uzbekistan total population), and registering, particularly in Namangan, the second lowest country GDP per capita. The Valley suffers from the consequences of inadequate land and water management practices which have resulted in high salinity levels in the irrigated land, causing a drop in crop yields by a third. The target group will be resource-deprived rural female and male inhabitants, including youth. These would comprise: (i) *dekhan* farmers; (ii) smaller private farmers; (iii) rural entrepreneurs; and (iv) rural unemployed in the selected geographic areas. Targeting mechanisms will ensure that the needs and priorities of more vulnerable groups, such as woman-headed households and unemployed youth, are catered to. IFAD targeting strategy will continue adopting a gender equitable, inclusive approach (GESI) enabling women, and various socio-economic groups, including less privileged households, to take advantage of project investments to improve their livelihoods.

13. **Scaling-up.** IFAD interventions will pioneer new methods, approaches and engagement tools already serving as a model for other investment by Government, development partners and the private sector. RB-COSOP will follow a similar approach. New initiatives in comprehensive investments in commercial production to market chains for a variety of important commodities will be introduced, on a modest scale. After refinement and effective demonstration, these models will be available to inform further public and private investments.

14. COSOP identified certain implementation risks and mitigation measures as presented in the table below.

**Table 1: Potential COSOP Implementation Risks and Mitigation Measures**

Risk	Mitigation measure
<u>Inadequate governance procedures</u> that lead to inappropriate use of project resources	IFAD will work closely with GOU to ensure that all agreed procurement and disbursement procedures are rigorously followed
<u>Distortive policy environment</u> , whereby interventions are not consistent with effective targeting of the agreed beneficiaries, leading to the possibility of elite capture	The Project Implementation Manual (PIM) will detail explicit measures to ensure correct targeting of benefits. In addition, regular IFAD supervision mission would monitor the progress and reinforce the implementation of criteria for effective targeting.
<u>Environmental risk</u> , whereby interventions are not well incorporating sustainable land management and climate change (CC) adaptation measures, leading to risks of environmental damage through investments.	Project design will include climate-risk assessments in the target areas, in order to identify vulnerable sites, existing and projected environmental and CC problems related to agriculture development and people's livelihoods, and will propose climate-risk reduction and CC adaptation measures throughout value chains, in line with the Governmental priorities. The PIM will provide details of the criteria to incorporate climate-risk reduction in the project investments
The proposed <u>decentralized project implementation arrangement</u> is relatively new for Uzbekistan, and there is a risk that it will not be effective.	Detailed attention will be provided to this risk during project design to assess the existing models from other development partners and discuss the proposed model with the central and local Government
Designing <u>one project over two PBAS cycles</u> has inherent risks, not least being the delay in project effectiveness for the first PBAS cycle, due to Government's lengthy clearance process.	Discussions were held with the Government on various scenarios of expediting project clearance by the Government, one of which was close collaboration between the partners in design and the preparation of the feasibility study in parallel to project design

Source: Uzbekistan COSOP

## Lessons Learned and incorporated in the design

15. **Lessons in broader country and regional context.** Despite the relatively short implementation experience of investment projects, certain general lessons emerged through consultations with the main development partners in Uzbekistan, and a review of experiences from neighbouring countries with similar history and conditions.
- (a) Investment interventions are likely to be more successful in the areas where common ground and understanding of development paths exists between the financing institution and the government;
  - (b) The use of pilots, demonstration of practical farm-level results, and the dissemination of these outputs, are appropriate vehicles for the spread of potential sources of innovation/ productivity;
  - (c) Identified beneficiaries should be incorporated into clusters and production/ processing chains to reduce costs and to take advantage of group formation/ training, collective market links/ outlets, and economies of scale; and
  - (d) Commercial financing institutions need to be supported in order to provide incentives for their expanded outreach in rural areas, including capacity building for field-level operational staff.
16. **Lessons on small farmers and value chains.** The design team also took into consideration the experience from IFAD's operations in the region on smallholder farmers' integration into value chains. Key lessons are:
- (a) IFAD can be a strong catalyst for private and public partnerships to support smallholders when its projects present a clear framework of collaboration and conducive institutional environment for cooperation;
  - (b) Demand-driven approach to value chain development, focusing on those sub-sectors demanded by the target groups, is effective in terms of sustainability of the results and reaching out the target;
  - (c) Strategic partnership with private enterprises which are willing to improve value chain competitiveness at the same time to expand and deepen backward linkages with small scale farmers can result in the latter's successful integration in the value chains;
  - (d) Value chains development projects need to identify bottlenecks and opportunities at all critical points along the entire chain (from production, aggregation, processing, marketing and consumption) and engage key stakeholders (including research and extension), delivering both private and public goods; and
  - (e) In relation to the above, value chain interventions for resource poor farmers need to promote effective combination of investments and technical assistance.
17. **Project management.** Another set of lessons learnt relates to project management, mostly from the implementation of HSP. These are:
- (a) Limited institutional capacity. There has been difficulty in attracting qualified local personnel. Knowledge on project management and technical expertise is limited, and staff retention is a challenge. Moreover, the location of the main PMU in the capital, Tashkent, has meant that inter-action with stakeholders and beneficiaries is less frequent and significantly more difficult than it would be for a decentralised PMU;
  - (b) Coordination and information sharing. Notwithstanding the above, locating agricultural projects under one agency (Rural Restructuring Agency) facilitates information sharing across project management/implementation units and improves coordination;
  - (c) Measuring, analysing and documenting results and outcomes. Approach to capturing M&E data on outputs, outcomes, and impact of interventions can be ad-hoc and not systematic; and



- (d) Government processing of investment proposals. The Government has a requirement for a Government-led feasibility study for each donor project. While this is appropriate, it does require significant time and resources, and needs to be catered for in project scheduling. This points to the need to try and conduct project design and government processing in parallel, rather than sequentially.

18. **Lessons from HSP.** Implementation experience of the HSP so far highlighted the following lessons, which were incorporated in the design of ADMP:

- (a) Creation of a specific credit window has proven to be an effective targeting mechanism;
- (b) Banks rely on collateral in their agricultural lending practices and have not developed internal capacities to provide cash flow based loans and offer repayment schedules based on agricultural businesses' seasonality; they continue to treat agricultural businesses in the same way as other types of borrowers, while their ability to perform solid business analysis also remains limited;
- (c) PFIs' technical capacities to assess agricultural loans are still largely inadequate, technical assistance to strengthen loan officers' capacities to assess loan applications particularly in relation to agricultural risks and seasonality-based appropriate repayment schedules will be desired to improve their agricultural portfolio and client services;
- (d) Gender targets are a useful measure to improve women's participation, but for gender mainstreaming to be effective a full-time specialist needs to be in place to raise awareness, create enabling environment and monitor the performance; and
- (e) Selection of irrigations schemes on the basis of a simple and clear set of predetermined criteria in line with the project outcome, combined with competitive and objective ranking according to the degree of positive impacts, can be a powerful tool to direct benefits from irrigation investments to the improvements of livelihoods and economic growth in less advantaged rural communities.

19. The main lesson from the similar IFAD activities is that to maximize the impact of irrigation infrastructure, it is essential they are closely synchronised with other projects interventions to achieve the desired complimentary wherever relevant and demanded. It is also essential to fully define maintenance arrangements of build infrastructure and also put emphasis on environmental assessment and operation of infrastructure.

20. Thus, the main design considerations for infrastructure component activities are consequently:

- (a) The need to develop and demonstrate replicable mechanisms for climate change adaptation, infrastructure and environmental related investment to support commercial, market-oriented businesses in the programme area;
- (b) Specification of clearly defined, transparent and consistently applied investment selection criteria including technical feasibility, and climate change vulnerability and support for agricultural commodity chains or clusters;
- (c) When beneficiaries articulate their needs, sustainability and relevance is improved. Hence support should be provided on the basis of demand-driven investment opportunities available to individual farmers, farmer/producer organizations and private sector services;
- (d) Acceptance of the principle of cost sharing in investment (by Government at public level and by farmers at the on-farm level) and the adoption of climate change adaptation and market terms for all investments under consideration.

21. **Lessons from international experience on Guarantee Schemes.** Credit markets for SMEs are characterized by market failures and imperfections, which provide a rationale for government interventions. Credit Guarantee Schemes (CGSs) are a common form of such interventions. A CGS provides third-party credit risk mitigation to lenders by absorbing a portion of the losses on the loans made to SMEs in case of default, in return for a fee. More than 100 countries have a CGS in place and the number is growing.

22. The World Bank and FIRST Initiative organised a Task Force for the Design, Implementation and Evaluation of Public Credit Guarantee Schemes for Small and Medium Enterprises, which represents international associations of both CGSs and lenders<sup>106</sup>. Main findings of this Task Force include that CGSs to be successful have to: a) be independent, have adequate funding, mixed ownership and independent supervision; b) have a clear mandate, corporate governance structure, independent Board of Directors, internal control framework and risk management; c) operate with clear selection criteria for SMEs, lenders and credit instruments and offer partial guarantees that comply with prudential regulation and provide capital relief to lenders; d) offer risk-based pricing policy and an straight forward claims process; and e) monitor and evaluate performance both internally and externally and publicly disclose non-financial information periodically.

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<sup>106</sup> PRINCIPLES FOR PUBLIC CREDIT GUARANTEE SCHEMES FOR SMES. The World Bank. 2015.

## Appendix 4: Detailed project description

### Project description

#### Project area and target group

1. The Project will be implemented in Andijan, Fergana and Namangan regions (commonly called the Fergana Valley) which are among the most disadvantaged. COSOP highlights that the Fergana Valley are severally challenged by very high population density, and Namangan registers the second lowest country GDP per capita. ADMP's main target groups are: (i) rural low-income households of *dekhan* farms, who strive to increase income from agriculture through active participation in the Project supported value chains; (ii) small private farmers engaged/interested in horticulture and livestock (with farm size of up to 5 ha); (iii) agribusinesses with existing or potential linkages with (i) and (ii); and (iv) rural youth in the Project regions. Special attention will be paid to ensure the participation of female-headed households both in *dekhan* and private farmers, as well as to reach out female youth. With respect to rural finance, the Project will focus on those rural businesses that are in need of investment for their business development but face constraints such as lack of available funding Projects or collateral requirements.

2. The ADMP will work with selected value chains and provide holistic and coordinated support to all the actors within a supply chain in a way to improve the chains' overall performance. The Project will invite agribusinesses and other entities qualifying for the role of a Leading Entity (LE) and who are willing to develop sound business models under productive partnerships with their suppliers. Smallholder producers, who are the Project's primary target group, will be captured in each selected value chain in order to enhance their inclusiveness and improve their returns from agriculture thanks to the direct contractual arrangements with LEs. ADMP's targeting strategy will therefore incorporate the principles of smallholders' inclusiveness. *Mahallas* will play an active role in identifying and mobilizing farmers at the community level in a transparent and participatory manner, and will ensure to avoid the elite capture of the Project opportunities and benefits.

#### Development objective and impact indicators

##### Project development goal/objective

3. The **Goal** of ADMP is *to improve the incomes and livelihoods of rural people in the Project area*. The Project's **Development Objective** is *to increase inclusiveness and profitability of selected value chains through enhanced productivity, market access and improved natural resources*.

##### Impact indicators

4. Project implementation will be guided by the Project's Results Framework. Key performance indicators at **Goal** level are: (i) at least 80 per cent of Project beneficiaries report at least 20% increase in income<sup>107</sup>; and (ii) at least 75,000 households receiving services promoted or supported by the project. Key performance indicators at the **Development Objective** level are: (i) at least 10,000 full-time jobs (and equivalent) created<sup>108</sup>; and (ii) at least 70 per cent of supported smallholder producers including *dekhans* report a 20 per cent increase in sales along the value chains.

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<sup>107</sup> This indicator is inspired by the RIMS Impact-level indicator "Number of people experiencing economic mobility", corresponding to SDG target 1.1 and 1.2, but taking into account the specific aspect of income, where the ADMP is expected to generate an impact. These project's direct beneficiaries are estimated around 75,000 households. These include stakeholders benefitting of credit lines supported by the ADMP, as well as of trainings/other supports provided by the project and by the project's supported LEs, or from FFS curricula and guided exposure to technological demonstration plots.

<sup>108</sup> The target corresponding to some 80% of the number of full-time equivalent jobs created through ADMP interventions (see Appendix 10, Economic and Financial Analysis).

## Components/Outcomes

5. The Project will have three principal inter-related components as well as another one to support Project management and implementation. The four components are: (i) Inclusive Value Chains Development; (ii) Inclusive Rural Finance; (iii) Climate-Resilient Rural Infrastructure; and (iv) Project Management.

### Component 1: Inclusive Value Chains Development

#### **Component's Rationale, Approach, Outcome and Outputs**

6. **Rationale.** Diversification, modernization and import substitution of agriculture production is currently a priority policy of the Government as stipulated in the President Decree No. 2460 on agriculture sector reforms and development for 2016-2020 as well as in the Welfare Improvement Strategy for 2013-2015 (WIS II). Diversification of products, particularly horticulture crops, livestock and related sub-sectors, is expected to enhance rural family incomes and reduce the number of low income households. This can happen when small-scale farmers are effectively integrated into value chains on a sustainable basis, and have developed capacity to produce for the market, especially high value crops. IFAD's experience with the value chain approach in the region and elsewhere suggests that for small-scale farmers to participate in value chains for their benefit, roles of the private sector actors are crucial. Traders/buyers, aggregators, processors, exporters and other private players shape to a large extent how the value chains perform. From the viewpoint of smallholder producers, including *dekhan* farms, conducive partnerships with them present a major opportunity for sustained income augmentation. The Project considers private sector operators willing to invest time and resources to increase value chain competitiveness in a way that also improves the benefits of smallholder producers as 'champions', and will support their efforts to strengthen their businesses. This in turn will result in making the value chains more inclusive to small-scale farmers.

7. In the meantime, there is an urgent need to improve farmers' capacity to produce for the market. Despite the stated importance for agricultural diversification and modernisation and keen interest among farmers to expand horticulture and livestock production, dissemination of modern technologies faces major challenges. Presently public extension services are almost nonexistent for the horticulture and sector due mainly to a lack of clear policy direction, as well as inadequate resources in the MAWR and related agencies. Fruits and vegetable growers mostly rely on informal extension services provided primarily through the input suppliers in conjunction with aid Projects<sup>109</sup>. For the livestock sector, veterinary services are widely available at community level, but the quality of services is still low. Strengthening the extension and research systems to the effect that farmers become well equipped with the knowledge and skills to produce in response to the market is another priority for their effective and sustainable participation in the value chains.

8. The ADMP will address a series of problems/limitations of value chain development. These will involve:

- Knowledge gaps (e.g., improved crop cultivation/breeding techniques), which may be exacerbated by a low value placed on learning and pervasive mistrust that impedes the sharing of knowledge;
- Market imperfections (e.g., weak bargaining positions of farmers);
- Inefficient technologies (e.g., use of unselected and low-yielding seed) that may persist because of unstable or undiscriminating markets, making investments in improved technologies seems too costly or risky.

9. **Approach.** Building on the results of the ongoing IFAD projects in the country, the ADMP will promote close collaboration between the smallholder producers and LEs. Component 1 provides capacity building support to selected private sector enterprises ('champions'), *dekhan* and small

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<sup>109</sup> ADB (2016), Report and Recommendation of the President to the Board of Directors on Horticulture Value Chain Development Project, Supplementary Document 15: Detailed Sector Assessment: Agriculture, Natural Resources, and Rural Development

private farmers in the Project target regions, public and private institutions in charge of knowledge generation and dissemination which will enhance farm productivity and performance of the value chains. Following considerations were taken in the design of the Component:

- *Demand-driven approach to value chain development.* The Project will promote a demand driven approach for value chain development. Such an approach would not require the pre-identification of value chains in the agricultural sub-sectors to be supported by the Project, but rather focus Project investments on those sub-sectors as demanded by the targeted smallholder producers. The value chain approach will focus on analysing the potential in general and that of various players in particular in each step of the value chain, while focusing its investments on those weak points which have the potential for improving the productivity, profitability, and competitiveness of the value chain players, particularly focusing on *dekhan* farmers.
- *Evidence-based identification of inclusive value chains and key actors.* Results of Rapid Market Assessments for the sub-sectors considered relevant and potentially beneficial for smallholder producers<sup>110</sup> will inform the process to identify the value chains that are/can be inclusive and private sector operators with critical roles to play ('champions') as the Project partners. These studies will enable the Project to select private enterprises in a way that is objective and transparent at the same time with strong focus on inclusiveness. After expressing their interest, the private enterprises will become the Project's Leading Entities (LEs) and entitled to its support to elaborate their value chain development plans ('roadmaps').
- *VC Upgrading.* The Project will promote upgrading of selected value chains and will include actions taken by producers, processors, input suppliers, and traders at various points in the value chain to increase future productive capacity and competitiveness. Upgrading actions can be divided into three groups:
  - ✓ Investment in *physical capital*: expenditure of money to acquire plant, equipment, and inventories;
  - ✓ Investment in human capital: expenditure of time, effort, and money to learn and apply better ways of producing, processing, and marketing the commodity or commodities concerned;
  - ✓ Investment in new and better business relationships: expenditure of time and effort to create and maintain new and more profitable business relationships that offer improved incentives to producers and foster growing trust among those involved in the business relationships.
- *Complementarity and Synergies between Components.* The LEs with successful roadmaps prepared will be favourably considered for receiving loans from PFIs under Component 2. While loan applications will be assessed individually, the Component will provide complementary support to enhance their business operations through provision of technical assistance and training to farmer suppliers, as well as through measures to elevate technical knowledge and service quality of the other actors as well as access to improved infrastructure under Component 3 to improve overall competitiveness and efficiency of the value chains.
- *Coordination with other projects.* Ongoing and pipeline projects of other agencies (World Bank, ADB, EC, USAID, etc.) also have support targeting at value chain stakeholders in horticulture and livestock sectors. The Project will promote close coordination, especially with those projects also under the RRA, based on smooth information flow and open dialogue in order to ensure sound synergies and avoid duplicated efforts.

10. **Outcome and Outputs.** Component 1, outcome of which is 'enhanced capacity for sustainable and efficient performance of targeted stakeholders', has two aims: to create an enabling business

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<sup>110</sup> Rapid End Market Assessments for four value chains (apiculture, fisheries, sericulture and small ruminants) were undertaken during the design (see Project Life File). More assessments (at least another four) are planned at the beginning of Project implementation

environment for agribusinesses in selected value chains with strong backward linkages with smallholders; and to strengthen the capacities of the farmers and other stakeholders of those value chains. This outcome will be measured by the following indicators: (i) 70% of supported smallholder/ *dehkan* farmers engaged in partnerships/ commercial agreements with LEs; and (ii) 80% of smallholder producers reporting adoption of new / improved technologies or practices. Accordingly, the Component comprises the following two Sub-Components: (i) Enabling Business Environment for Inclusive Value Chains; and (ii) Capacity Development for Value Chain Stakeholders. Outputs of the two Sub-Components and accompanying indicators are presented in the table below.

Output	Indicators
Output 1.1. Enabled business environment for inclusive value chains	<ul style="list-style-type: none"> <li>▪ Value chain mapping exercises of at least 8 selected sub-sectors are completed</li> <li>▪ At least 4 additional Rapid Market Assessments are completed</li> <li>▪ At least 1,200 Leading Entities prepare strategic plans for value chain development</li> </ul>
Output 1.2. Strengthened value chains stakeholders	<ul style="list-style-type: none"> <li>▪ At least one-half of the identified entrepreneurs receive technical assistance support through LE-designed assistance, demo plots or FFSS</li> <li>▪ Up to 600 <i>mahalla</i> leaders supported in Project activities and training</li> <li>▪ Up to 6,400 farmers participate in demo plot tours and 2,250 farmers participate in FFSS (at least 30 per cent women)</li> <li>▪ 3 Zoo-Veterinary Stations are upgraded into comprehensive service clinics and extension centres, each with 2 mobile vet clinic (covering up to 800-1,000 farmers each year)</li> <li>▪ At least 30 veterinarians and zoo-technicians participate in animal health related study tours and another 24 stakeholders participate in relevant international trade fairs, conferences and exhibitions</li> <li>▪ Women's Business Association's Regional branches receive support to strengthen their services to female entrepreneurs.</li> <li>▪ The Chamber of Commerce and Industry provides support on youth access to credit (including the dedicated credit line).</li> <li>▪ The SRI-LPF provides updated livestock production and financial information</li> <li>▪ Up to 8 agricultural products receive support on quality and safety standards harmonization</li> <li>▪ 1 regional Plant Quarantine Laboratory in the Project area operating to facilitate safe import of new planting materials</li> <li>▪ 30 international study tours organized for government staff (preferably from <i>hakimiats</i>)</li> <li>▪ 24 international visits organized for government staff to participate in events including conferences, fairs, exhibitions</li> <li>▪ At least one communication product per year including lessons learned and how-to notes on successful innovative practices</li> </ul>

### **Description of Component Activities**

11. **Sub-component 1.1: Enabling Business Environment for Inclusive Value Chains.** This Sub-component aims at identifying the value chains, which will benefit both smallholder producers and private sector operators, and providing support to their strategic planning process that gives the basis for the stakeholders' access to Project opportunities. Specific capacity development will include the following key activities (see Annex 4.1 for a sequence of actions and outputs):

- (a) Value Chain Mapping exercises based on Rapid Market Assessment results
- (b) Rapid Market Assessments of additional sub-sectors
- (c) Support to the design of VC development plans ('roadmaps') prepared by Leading Entities (LEs)

12. **Value Chain Mapping.** The Project Management Unit (PMU) will organize exercises to map out the value chains of the selected sub-sectors and key actors on the basis of Rapid Market Assessments. The first set of VC mapping exercises will target the four sub-sectors (apiculture, sericulture, fisheries and small ruminants), following from Rapid Market Assessments, which have been undertaken during the design stage. Additional information from *hakimiats*, industry associations

and other stakeholders for modification and validation will be collected. The output of the exercise is a list and geo-location of private enterprises with existing and potential linkages with the primary target groups of the Project (*dekhan* farmers and small private farmers). Such private enterprises must be legal entities and would include input suppliers, intermediaries/aggregators, processors and exporters in varying sizes. Their head offices may not be in the Project area, but the enterprises need to engage smallholder suppliers in at least one of the Project target regions. Medium to large farms that undertake any such functions will be included as value chain actors and qualify as LEs. On the basis of the results, the PMU will prepare a list of such enterprises, organize information dissemination meetings at regional level for the enterprises, and request them to formally file Expression of Interests with the evidence that they are legally registered. Similar mapping exercises will be conducted for other sub-sectors, including fruits, vegetables, and other livestock once their Rapid Market Assessments are completed (see below).

**13. Rapid Market Assessments for Additional Sub-sectors.** It is believed that some other sub-sectors are equally well positioned to nurture inclusive value chains in view of suitability for smallholders' entry and productivity increases, and potential for high value addition. Such sub-sectors would include fruits, vegetables, poultry and other livestock products (for example rabbit). The Project will support Rapid Market Assessments for additional products at the onset, which will be followed by the same value chain mapping exercises as mentioned above. At least four such assessments are envisaged to be undertaken at the beginning of Project implementation.

**14. Preparation of Value Chain Development Plans (VCDP).** The Project will assist those private enterprises which expressed their interests to become Project partners as Leading Entities (LEs) with the formulation of a value chain development plan. These plans, also called Roadmaps, will outline a business model and include a chart that shows clear linkages with smallholder producers – their locations and an estimated number. The VCDP will also present the LE's plan to improve its and the suppliers' technical knowledge and capacities in order to maximise the functioning of the value chain. It will also have optional sections on: (i) measures to address climate change mitigation and adaptation; and (ii) initiatives to promote youth employment and female leadership within the enterprise. The VCDP will be the basis for the LEs' application for technical assistance support (under Sub-component 1.2). A description of the VCDP process and a sample VCDP are contained in Appendix 4, Annex 1.

**15.** Regional Coordinators will take the overall responsibility for coordinating the process of LEs' VCDP formulation. They will guide the process through close communications with the LEs and facilitate their interactions with farmers through linking them with *hakimiat* and *mahallas*. Each VCDP will be assessed by the PMU against predetermined criteria which will focus on soundness of business orientation and inclusiveness. Final selection will be made by a panel of external persons (five to seven members), including those from the private sector, industry associations, and relevant projects with good track records such as USAID's Uzbekistan AgLinks project. Selected LEs will notify one of the Project PFIs, which will start appraisal process of the submitted loan application (under Sub-Component 2.2). Simultaneously, the LEs will start preparing detailed proposals for farmer training. Sequencing of VCDPs' implementation will be based on a first come - first serve principle.

**16. Sub-component 1.2: Capacity Development for Value Chain Stakeholders.** The Sub-component will provide demand-driven capacity building support to:

- (a) Private enterprises considered as LEs;
- (b) *Mahallas* for their facilitation of community mobilization, awareness building and identification of value chain participating households;
- (c) *Dekhan* farmers and small private farmers in the target Regions;
- (d) State veterinary services;
- (e) Business and industry associations, research institutions;
- (f) MAWR Centre for Certification and Standardisation;
- (g) MAWR Management Information System;

(h) MAWR Regional Plant Quarantine Laboratory (Uzglavgoskarantin) for Fergana Valley.

17. In addition, the Sub-component will support the Project's knowledge management initiatives through knowledge sharing workshops, study visits of the *Hakimiat* officials, and publication of information materials for a wider audience, including audio-visual ones. Topics would include best practices under the Project support, technical innovations, and public-private partnership for inclusive value chains.

18. **(a) Support to LEs.** LEs (limited liability companies, registered farms and agri-firms) will be the backbone for actually forming value chains, i.e. getting commodities from growers, to processors, to distributors and to markets; they will be the recipients of Participatory Financial Institution (PFI) loans (Component 2). Therefore, the Project will primarily tailor capacity building and advisory services to the needs that LEs identify in their VCDP. The Project will organize workshops (half-day or one-day) on business development and management, inviting successful entrepreneurs and resource persons as speakers. Topics will be selected on the basis of LEs' priorities and interests, and focus on innovations and new approaches, which they may not be exposed otherwise, such as use of IT in production, logistics and quality control. Such workshops will also serve the purpose of promoting networking and knowledge sharing among the LEs.

19. The Project will also offer LEs opportunities to strengthen their knowledge on marketing, especially for exports, through seminars on such topics as sanitary and phytosanitary (SPS) standards and other regulations as well as preferential measures for export promotion. In addition, the Project will engage qualified experts who will provide focused business advisory services tailored to individual LEs on such cutting-edge topics as water and energy saving technologies, application for international food industry standards (ISO 22000 series, HACCP), preparation of company's testing laboratories for certification (ISO 17025), and market prospecting for niche products. Criteria for LE's access to the advisory services would include: degree of public goods nature of the investment (such as contributions to climate change mitigation and adaptation, new jobs creation, etc.); and the cost for such advisory services.

20. **(b) Support to *mahallas* (communities).** *Mahallas* are a well-established mechanism recognized by the Government to guide and check the community members' access to public goods. They have a comparative advantage to be the guardians of public goods as a socially respected mechanism for identifying low-income farmers, women-headed households, unemployed youth and any other community subgroup of interest. Therefore the Project will engage *mahallas* as important Project stakeholders for raising awareness on the Project, support LEs' efforts in identifying suppliers among the target groups, facilitating the selection of other beneficiaries, and coordinating with *hakimiats* and PMU/PIT as necessary for implementation of Project activities in their jurisdictions. The Project will also solicit *hakimiat's* support in provision of additional land for the smallholder producers when and as required for implementation of the VCDPs. *Mahallas* will be also expected to play an important role in monitoring Project results. An estimated 600 *mahallas* will be trained (120 sessions with 5 *mahalla* leaders each). A qualified resource person (Social Mobilizer) will plan and organize these meetings, prepare information materials both for the meetings and for each *mahalla* to use as part of their own activities at the communities, such as at information corners of *mahalla*.

21. **(c) Support to farmers.** The Project will provide opportunities to *dekhan* and small private farmers in the target Regions who are not necessarily linked with specific LEs with a view to preparing them for future participation in value chains with improved knowledge on new technologies. There are numerous private and *dekhan* farmers who oversee successful new farm enterprises such as greenhouse tomato growing, rabbit raising, poultry raising, pomegranate orchards, livestock fattening and honey production. Many of these successful farmer-entrepreneurs researched their new agriculture enterprise on the Internet then applied the advice. The Project will engage such model farmers as resource persons (Master Trainers), and actively promote knowledge sharing on modern technologies, good agronomic/animal husbandry practices, water management, aquaculture, etc.



22. Demonstrations. Demonstration plots will be established in the *mahallas* located in or near the outreach of the Project supported value chains in the three Regions. Technologies to be demonstrated will reflect the results of the Rapid Market Assessments and other considerations, but most likely include zero/minimum tillage, drip/sprinkle irrigation (for both in open field and greenhouse), modern animal husbandry practices, drought-resistant crops, introduction of siderates and legumes for soil improvement.

23. Farmers Field Schools. Up to 90 FFS will be set up or strengthened as and where there is demand by the LEs or no other alternatives are acceptable in the specific location. The FFSs last for the whole growing cycle and are organized during each cropping season. The Project FFSs will operate under four interrelated parts, i.e. irrigation water management, crop and livestock diversification and modernization, value chain development and constraint analysis. Other parts may be added to fit regional conditions and priorities (i.e. animal health, good farming practices including feeding, on-farm management with focus on planning, hygiene standards for raw material handling, financial literacy, business planning and management of collection centers and other forms of product aggregation for the improved market access and margin distribution upstream the value chain). More information on FFS is presented in Annex 2 to Appendix 4.

24. **(d) Support to veterinary services.** Uzbekistan is favoured with a wide distribution of Zoo-Veterinary Stations that cover all livestock raising areas where mostly Government employed vets, but also private vets, deliver both types of tasks. The ADMP primarily aims to build staff capacity in the field Zoo-Veterinary Stations but secondarily, and equally important, ensure that the field service vets coordinate with and funnel information and specimens into the public sector regulatory veterinary structure. Following the recommendations of the recent OIE assessment of Performance of Veterinary Services (PVS Gap Analysis, 2017), the planned OIE report will identify gaps mostly associated with regulatory tasks (laboratory diagnosis, disease control policy, risk analysis, communication with stakeholders, sanitary laws, public health, etc.). The OIE report will also prepare strategies and budgets for closing identified gaps with the goal of bringing the Uzbek Government veterinary arm up to equivalence with neighbouring countries and potential trading partners. Alternatively, the ADMP aims to teach modern curative/production medicine tasks and implement them as a demonstration in the field in households, *dekhans* and small private farms. The ADMP will complement the findings of the 2017 OIE PVS Evaluation Report in terms of removing the identified gaps in critical competencies at the field level.

25. Thus, the Project will assist the State Veterinary Committee (SVC) to demonstrate its equivalency with sanitary standards of trading partners in view of possible accession to/trading with the Eurasian Economic Union (EAEU). To facilitate this, the Project will invest in upgrading selected public vet service 'critical competencies' as defined by the OIE in order to meet international standards. Significant investment will focus on upgrading skills and competence of the SVC staff and supporting the government for animal identification on a pilot basis in selected value chains.

26. The field Zoo-Veterinary Stations are the first line of defense against incursion of reportable infectious diseases. The training and equipping for the field vet staff, both public and private, will help assure that disease surveillance information and specimens for diagnostic labs are funnelled into the Government regulatory system. Uzbekistan is bordered in the north and east by Kazakhstan, Tajikistan and Kyrgyzstan and in the southeast by Afghanistan. Tajikistan and Afghanistan have reported *peste des petit* ruminants to the OIE and the disease is thus endemic. The Fergana Valley is at risk of incursion of this, and other, serious transboundary diseases of large and small ruminants. Thus, building capacity of the field Zoo-Veterinary Station staff for disease surveillance and reportable disease awareness is a prudent Government priority which the ADMP directly supports.

27. The practice of production medicine has long been applied in large farming operations in developed countries and is one contributor for steadily improving livestock productivity in these countries. Production medicine is practiced to only a limited extent on large private farms and dairies in Uzbekistan today. Refresher training with a focus on production medicine will help introduce new techniques and equipment (e.g. ultrasound diagnosis of pregnancy in small ruminants), which Uzbek

vets are aware of but have not yet put into use. Production medicine tasks will be added to the emergency, curative and preventative vaccinations which are on offer today.

28. Three Demonstration Zoo-Veterinary Stations, conveniently located in each of the three regions, will be refurbished and equipped in order to extend the clinical, prevention, and production services on offer. These demonstration clinics will have a training classroom (seating up to 50 persons) fully equipped with audio-visual facilities and useful for farmer training. The Project will also provide veterinary equipment that could include: portable ultrasound unit for pregnancy diagnosis in cattle and small ruminants, stocks or squeeze chute for examining large animals (and foot care), practical laboratory equipment such as parasite egg counting chamber (McMaster), laboratory grade binocular microscope, blood staining solutions and chemicals, small disposable laboratory supplies, centrifuges, refrigerators, furniture and small surgical items (dehorner, obstetric equipment). A supply of containers for shipping biological specimens (by air or road) that meet international safety standards will be also provided for each demonstration Zoo-Vet Station. Six double-cab pick-up trucks or 9 passenger vans will be purchased as mobile clinics, two for each demonstration clinic. The pick-up truck specifications will need to meet standards for 'veterinary boxes' for organizing veterinary remedies, supplies and field equipment. The 9 passenger vans will have a custom fitted box with robust compartments and drawers for holding remedies, supplies and equipment. Mobile clinics will also transport vets and zoo-technicians for refresher training in production medicine. Additional refresher training short-course modules (up to 10 contracts in total) will be provided through contracting local Master Farmers or Veterinary Subject Matter Specialists for practical training in health and production of small-scale poultry raising, fish/aquaculture, rabbit raising or other animal health and production themes. This technical training will be combined with training on using the Internet to find valid information on animal husbandry and health.

29. Six Study Tours/participations in international conference (2 from each region, for 5 persons each) for up to 30 public or private veterinarians/zoo-technicians are planned for viewing production medicine practices in livestock enterprises in a developed country. The study tours will enable Uzbek professionals to learn how herd health practices are organized and run in these countries. Each study tour could last up to two weeks in one or more countries with visits to private food animal or mixed animal practices, a regional government diagnostic laboratory and the office of the national professional veterinary association.

30. The SVC is also tasked with permanently identifying livestock in the country as an international standard under the OIE Terrestrial Code. The Project will support the government's animal identification system on a pilot basis, and it will be limited to some selected dairy value chains in one of the project regions. The Project will provide support in development of a database software, technical assistance for field staff, ear tags (estimated at 75,000 dairy cattle plus 30,000 offspring annually), supervising research activities and database maintenance contracts. Creation of the database software and its field testing would allow the government to identify possible options for further development of the animal identification system in the country.

31. **(e) Support to business and industry associations, and research institutes.** The ADMP will work with the existing organizations which are mandated to provide assistance in line with the Project's priorities on (i) promotion of female-led businesses, (ii) support to youth start-ups; and (iii) dissemination of modern technologies in support of effective value chains.

32. Business Women's Association of Uzbekistan. The BWA is the single most important organization to support female business leaders and start-ups with strong track records for coaching and nurturing female entrepreneurs in practical business skills development, access to credit and marketing. The Project will engage Regional branches of the BWA in the Fergana Valley to conduct seminars focusing specifically on agriculture value chains for women, and training for female rural youth. Such events will be beyond the scope of their normal activities targeting the members, and will invite non-members who are among the Project target groups. The Project will encourage the BWA offices to organize training for rural female youth in topics beyond the conventional ones, such as

handicraft and tailoring. The Project will also support international tours of female LE leaders (5 women from each Region) for agribusiness market exploration and business networking.

33. Chamber of Commerce and Industry. The CCI is the most important representative of the business community in the country with strong leverage to advise the Government on conducive environments for competitive business development. It also plays an important role in supporting youth start-ups, and is a partner of a UNDP project, called 'Business Forum of Uzbekistan'. Following the model of the UNDP project, the ADMP will work with the CCI for training the candidates for the credit line for youth (Sub-component 2.3), who intends to complete bankable business plans for submission to PFIs.

34. Scientific-Research Institution for Livestock, Poultry and Fishery. There is a lack of up to date animal production data (i.e. milk production per cow) and changes in production from using improved technologies. This data and information are needed for extension messages, investment planning, Government strategy making plus as a benchmark to measure breeding progress. The Project will extend technical assistance to the Scientific-Research Institution for Livestock, Poultry and Fishery (SRI-LPF) to help Uzbek researchers carry out practical studies. This will complement support from other donors (e.g. Korean Aid) as well as complement pipeline capacity building projects from other donors (e.g. WB Livestock Sector Development Project). The results of these practical research studies and technical assistance will help inform extension messages as well as indicate expected returns (production and financial) from application of improved technologies by *dekhan* and small private farmers. LEs and farmers will benefit from quantifying the expected changes in production from applying modern technologies, and banks and Government planners will have current data with which to predict bankable investments.

35. The SRI-LPF will carry out feeding trials on milk production and financial effects of feeding improved rations for indigenous and semi-improved dairy cattle breeds. The goal of this activity is to generate milk production, health and financial data for use in extension messages for *dekhan* and small private farmer cattle producers, milk processors and banks.

36. The institute's cattle breeding and ruminant nutrition staff will be responsible for this contract which can be carried out at the institute's research farm in Tashkent region and/or in suitable branch farms. Up to 5 (at least three individuals of each breed) popular and common breeds of indigenous and semi-improved cross breeds of dairy or dual purpose cattle will be included in the feeding trials. Data will include milk production volume (recorded daily over one entire lactation) and milk composition (fat, protein, pH, solids recorded monthly); health (particularly udder, breeding efficiency and lameness); and production costs (concentrate feed and forage, medicines, breeding and normal management).

37. When production and financial results are obtained, the information will be disseminated as extension material via meetings, brochures, farmer training and training of trainers (TOT) for bank and other agriculture financial institutions and agri-firms. Data and information can also be disseminated as technical papers to milk processors, academic institutions, scientific meetings and other users. This contract will run through Project Year 4 with the extension information put to wide use in the remaining years.

38. When industry or commodity associations identify value chain development constraints and request assistance to remove these constraints, the Project will meet these requests through provision of technical assistance and equipment/supplies on the basis of a needs assessment.

39. Scientific Pisciculture Institute is one of the research institutes under the MAWR mandated to develop and promote modern fish culture technologies, and train students and practitioners. It is proposed that the Project will engage the institute to conduct applied research on modern fishing technologies which are suitable for medium- to small-operators, including management of hatcheries and feed production. It is expected that the Scientific Pisciculture Institute will work closely with

Uzbekbaliqsanoat, a company newly created under the recent Presidential Decree to serves the functions of the fisheries industry association<sup>111</sup>.

40. **(f) Support for quality and safety standards compliance.** The Project will strengthen the capacity of public and private sector to harmonize and develop standards. For new crop or livestock commodities to be safe for domestic consumption or acceptable to importing countries, they must meet acceptable quality and safety standard, including the public safety standards required by the Codex Alimentarius and the SPS Agreement. The Project will support the work of the MAWR Centre for certification and standardisation and other technical committees on harmonization of regulations and standards related to agricultural products, which will improve the current standards review process. It will provide training on technical regulations and standards. To do so it will establish a Group of Experts on harmonization of regulations and standards of quality of selected agricultural products, and it will provide technical assistance and training on introduction of regulations and standards. The Group of Experts will provide a set of capacity building and awareness activities such as:

- a conference on SPS standards for key individuals in government, the food and agriculture industry and consumer representatives in the role and functions of SPS standards;
- a series of Working Groups to work on harmonizing relevant Uzbekistan standards with those of SPS on a priority basis, to evaluate the cost and benefits of harmonization and to recommend changes to Uzbekistan laws and standards as appropriate;
- training of key individuals involved in the development of standards in SPS methods and the use of existing SPS materials;
- sponsoring active participation in the international SPS related meetings;
- provide support to join the International Union for the Protection of new Varieties of Plants;
- increase awareness on sanitary, phytosanitary, and quality aspects of the value chain, including the value of price differentials.

41. An important component of competitiveness in modern food production is traceability. This requires a reliable and documented chain of custody from farm to table. In high risk foods such as fish and meat products, this is likely to be a vital element in opening markets that are often closed to Uzbekistan exports for sanitary reasons, such as the border with Russia. Traceability in meat and fish production may be economically viable and required by the market, and thus the Project will provide technical support to implement it.

42. Toward this, the Project will provide initial equipment for a phytosanitary laboratory, supplies and training to support regional Government, local producer associations or agri-business for assuring quality and safety of agriculture products promoted under the Project and as well as their monitoring.

43. **(g) Support to the MAWR Management Information System.** The Project will assist the MAWR with the preparation of a project proposal for the establishment of a Management Information System. This system is to be integrated with the E-Government system of the country. A local consultancy will be contracted to develop such a proposal to seek donor and/or Government funding.

44. **(h) Regional Plant Quarantine Laboratory (Uzglavgoskarantin) for the Fergana Valley.** Introducing new plant varieties (seeds, root stocks, vegetative matter) may offer opportunities for new value chains which entrepreneurs will want to capitalize on. In order for these new value chains to develop, the Plant Quarantine Inspection can facilitate safe importation of this material with a new Regional Plant Quarantine Laboratory in the Fergana Valley. A new laboratory (up to 250 m<sup>2</sup>), a field vehicle and laboratory equipment/furnishings will be provided. The supplier of plant laboratory equipment will provide training for use of modern lab techniques to assure full functioning of the laboratory.

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<sup>111</sup> Presidential Decree on Measures for Fishing Industry Management Improvement, May 2017. It is responsible for: introducing new fishery technologies in the sector; supporting present and new farmers in organizing intensive fisheries, processing, marketing; expanding facilities and production of concentrated feeding, as well as establishing new hatcheries (Rapid End-Market Assessment of the Fisheries Sector, draft, 2017).

45. In addition, the Project will provide the following cross-cutting capacity building support to the above mentioned groups and other relevant stakeholders.

46. **Knowledge Management and Exchange.** As part of the Project's overall knowledge management efforts, this Sub-component will support agribusiness-related study tours and participation in international events, such as trade fairs, by selected Project stakeholders, particularly policy makers in the Regional *hakimiats*. Publication of strategic documents and innovative technologies (mainly videos) for wider implications, such as reports on good practice, will be also supported under this Sub-component.

47. **Provision for scaling-up.** The Project will accumulate knowledge during implementation in order to guide future decisions on scaling up. The stronger the value chain champion is, the greater the likelihood that the key drivers of the scaling-up process will be able to lead and sustain the efforts beyond the Project. The economic and financial benefits must be sufficiently attractive to drive expansion and sustain the initiative in the long term.

48. The ADMP adopts a comprehensive approach to *food security, climate change adaptation* and *gender mainstreaming* along the value chains. This is translated in a series of interventions looking downstream the value chain (support to improved input supply to increase production efficiency) up to upstream issues related to marketing of the final products and reducing losses. Gender sensitivity is secured by setting gender-related targets: 30% of farmers supplying to LEs need to be women; 30% of the participants of farmer trainings will be women; and 50% of the youth who will receive credit under a specialist window will be women.

## Component 2: Inclusive Rural Finance

### **Component's Rationale, Approach, Outcome and Outputs**

49. **Rationale.** The rural finance sector overview is detailed in Working Paper 1.

50. Despite increased lending to agriculture, the demand still remains very high. According to the World Bank, the investment needs in the horticulture sector alone are more than US\$ 1 billion. The financing needs for planting of new orchards and vineyards and replacement of some old ones alone are estimated to be around US\$ 600 million.<sup>112</sup>

51. Rapid Market Assessments have confirmed high investment demand in the Project area, especially for the fruit and vegetable value chains. The fruit and vegetable industry amounts to nearly US\$ 3 billion in exports (compared to only US\$ 40-48 million in sericulture) and is likely to further grow in light of recent contracts signed between Russia and Uzbekistan for delivery of agricultural produce. The three Project oblasts are among the largest producers of fruits and vegetables and contributors to exports. In recent years, the fruit and vegetable amalgamation/logistical centres (sorting, grading, storage, packaging, labelling) are gaining popularity worldwide. They act as the driving force for the entire value chain resulting in increased volume and quality of products, increased exports and import substitution. The estimated investment needed to establish logistical centres in the project area are estimated at about US\$ 13.5 million.

52. Another agricultural sector that is expected to see a high growth is fishery. According to IFAD's assessment, fish consumption in Uzbekistan is only about 20 percent of the per capita fish consumption norms prescribed by the Food Security and Healthy Diet Committee under the Uzbek Ministry of Health for 2017. In the Namangan region, the consumption is even lower – 10.8 percent of the norm (1.3 kg per capita per year instead of recommended 12 kg). It is estimated that fish producers in Namangan Region should expand fish production by at least 4 times to meet at least the current per capita consumption rate of the landlocked countries (5 kg/year on average); or in other words, to supply regional market with about 13,000 tons of fish to bridge the growing gaps of market demand. With an estimated US\$ 31,080 necessary to produce 9.6 tons of catfish fish using intensive

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<sup>112</sup> International Bank for Reconstruction and Development. Project Appraisal Document on a Proposed Loan in the Amount of US\$ 150 Million to the Republic of Uzbekistan for a Horticulture Development Project. May 15, 2014.

farming method, this would require an investment of over US\$ 42 million in the Namangan region alone.

53. While the situation with sheep and goat meat consumption is better, there is still room for growth as the current consumption is still below the recommended norms by about 20 percent. Increasing the sheep and goat population by 20 percent implies that there is a need for at least 0.8 million hectares of improved pastures to be available for growing animal feed and grazing. Considering that improvement of 1 hectare of natural pastures costs US\$ 100 on average, the total investment required is around US\$ 80 million.

54. The Government of Uzbekistan has been paying increased attention to the needs of smallholders and microbusinesses (including informal, household-based businesses) in financing their activities. This has been done through a variety of subsidized government projects that have been rolled out on a massive scale. Of high relevance to agriculture, in 2017 a new government project aimed at involving households in entrepreneurial activities (especially in rural areas) surveyed over 5 million households to assess their needs in funding and allocated UZS 5 trillion (US\$ 1.3 billion) for this purpose for 2017. During the first quarter of 2017, the project reached 240,000 households with small loans up to UZS 15 million (US\$ 3,900) for 3 years, with a 6-month grace period, at 9 percent per annum; the project is expected to reach 400,000 households with such loans by the end of 2017. Other similar projects aimed at reaching the lower-income segments with small loans include subsidized microcredits to vocational school graduates for the start-up and development of their micro businesses, including those in the agricultural sector (UZS 79.8 billion – US\$ 21 million disbursed in the first quarter of 2017), and microcredits to small and micro entrepreneurs (UZS 277 billion – US\$ 73 million allocated for 2017 for Tashkent alone).

55. On the other hand, the horticulture and livestock development projects of ADB and the World Bank target larger agroprocessors and producers (for example, the average loan amount of the WB Horticulture Development Project is US\$ 605,000 and that of the Horticulture Value Chain Development project of the Asian Development Bank is US\$ 1,007,000 as of September 2017<sup>113</sup>).

56. Access to finance therefore remains an issue for the so-called “missing middle”<sup>114</sup> – small and medium-sized agricultural enterprises and *dekhan* farmers in need of larger loans as compared to those typically offered through the government projects, yet smaller than those available through the facilities of the international financial institutions. Banks have not been meeting the demand in agricultural finance: in 2014, only 1.1 percent of adults in Uzbekistan borrowed from financial institutions for a farm or business, according to the World Bank Global Findex 2015. The total share of agriculture in the portfolio of 10 banks was about 8.2 percent as of year-end 2015, according to ADB (4.3 percent if two banks specializing in agricultural finance are excluded).<sup>115</sup> It should also be noted that most of the portfolio is invested in the cotton and wheat sectors as agriculture finance by banks is still predominantly focused on lending to these sectors – about 70 percent of all annual lending volumes to agriculture with the other subsectors getting only 30 percent of the total funding.<sup>116</sup> The prevalence of government’s directed credit Projects that banks must implement creates the need in dedicated liquidity for banks to be able to meet the demand in finance for agriculture for small and medium-sized enterprises. Other challenges faced by rural businesses include the lack of collateral to guarantee their loans, as banks typically require 125 percent coverage.

57. Access to finance can also help address the issue of unemployment, which is especially acute among youth (ages 15-24) in Uzbekistan. According to the World Bank, while the average unemployment rate in the country was 8.9 percent in 2016, among youth this indicator stood at 17.9 percent, and among young women – 19.4 percent in 2016.<sup>117</sup>

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<sup>113</sup> Data provided by the Rural Restructuring Agency, the implementation unit for both WB and ADB projects.

<sup>114</sup> <https://www.hks.harvard.edu/centers/cid/programs/entrepreneurial-finance-lab-research-initiative/the-missing-middle>

<sup>115</sup> ADB. Horticulture Value Chain Development. Supplementary Document 16: Detailed Project Economic Analysis. November 2016.

<sup>116</sup> <http://www.cbu.uz/ru/press-tsentr/vystupleniya-doklady/2016/08/70187/>

<sup>117</sup> <http://data.worldbank.org/indicator/SL.UEM.1524.FE.ZS?locations=UZ>

58. **Approach. Market-based approach:** The Project will not interfere with participating financial institutions' (PFI) pricing policies to avoid market distortions and ensure the financial strength and sustainability of PFIs. It will also provide support to the existing Guarantee Fund for Small Entrepreneurship Support through the provision of guarantee capital and technical assistance to develop the Fund's capacity to guarantee loans to small agricultural businesses. This way, credit guarantees will be fully integrated into the financial market and managed by a dedicated institution.

59. **Institutional Strengthening:** The Component will support institutions involved in the agriculture finance – the Guarantee Fund and commercial banks – by investing in their capacity and effectiveness to provide suitable financial products for agriculture through dedicated technical assistance and training, as described further.

60. **Outcome and Outputs.** The Inclusive Rural Finance Component will address these challenges that significantly limit access to finance for rural residents engaged in small and medium-sized entrepreneurial activities – the lack of collateral, the need in funding for agricultural projects related to agriculture diversification and modernization away from the cotton and wheat sectors, as well as the needs of the underserved segment – the youth. The outcome of this Component is 'increased productivity and efficiency along targeted smallholder-inclusive value chains', to enable value chain actors to increase their investment in profitable value chains through the provision of credit and a guarantee facility. The outcome will be measured by the number of incremental suppliers generated by investment along the selected value chains, accompanied by a PFI performance specific indicator: PFIs' portfolio at risk below 5%<sup>118</sup>. The outputs of the Component together with the accompanying indicators are outlined below:

Output	Indicators
Output 2.1 Operational Rural Guarantee Facility	▪ Value of loans guaranteed by the Rural Guarantee Facility at least USD 49.5 million by PY6
Output 2.2. Increased access to credit by rural residents	▪ At least 1,200 value chain stakeholders (Leading Entities) in the Project areas accessing financial services
Output 2.3. Increased access to credit by youth	▪ At least 1,000 young people (50% female) involved in the selected value chains accessing the financial services

### **Description of Component Activities**

61. **Component 2 – Inclusive Rural Finance** will be comprised of three sub-components: (i) Rural Guarantee Facility; (ii) Credit lines for agriculture diversification and modernization; and (iii) Special credit window for youth.

62. **Sub-component 2.1: Rural Guarantee Facility.** The Project will support the State Fund for the Support of the Development of Entrepreneurial Activity (State Fund) – newly created on the basis of the Guarantee Fund for the Development of Small Entrepreneurship (Guarantee Fund). Credit guarantees will facilitate access to finance to smallholders and other rural enterprises who lack acceptable collateral by offering the partial coverage of lending risks as these guarantees will encourage banks to lend to the agricultural sector.

63. Modalities of the RGF will include: a) it will offer portfolio guarantees to selected PFIs for up to 50% of the principal amount of loans issued without collateral for a maximum of US\$ 30,000 (or equivalent); b) PFIs will be required to leverage between 5 and maximum 10 times, the amount of their portfolio guarantee in rural loans, from their own resources (not including IFI credit lines); c) a cap of 7% on accumulated losses per PFI will be imposed, to maintain the guaranteed portfolio in check; d) loan appraisal and due diligence will be the responsibility of the issuing PFI, who bears 50% of each loan's risk and 93% of the portfolios' risk, thus avoiding problems of moral hazard; c) every three years the portfolio guarantees will expire and the PFI will have to reapply to renew the

<sup>118</sup> RIMS 1<sup>st</sup> level indicator

guarantee's validity; d) a management fee of 1% on the total portfolio, will be paid initially and upon renewal, to cover SFSBD's management cost; e) SFSBD's expenses relative to RGF will be kept at minimum as it will be responsible only for issuing letters of guarantees, monitoring portfolio performance of PFIs (data to be provided regularly by PFIs) and validate claims (due diligence); f) the claim validation will be kept simple to save cost and time – the SFSBD will only have to check if the PFI followed the agreed procedures pertinent to loan appraisal and due diligence; g) claim payment will be received by the PFI, no later than 20 days after claim application; h) PFIs will be required to pursue litigation to recover losses on defaulting loans covered by guarantees with the proceeds to be allocated following the pari-passu principle; i) PFIs and all other institutions involved will have to refrain from disclosing to beneficiaries that loans are guaranteed by RGF to avoid moral hard issues; j) PFI loans will be initially targeted only to target beneficiaries, but gradually will open to non-project applicants in the target area (Fergana Valley), k) all relevant authorities will supervise and regulate the effect of the guarantee system to the economy.

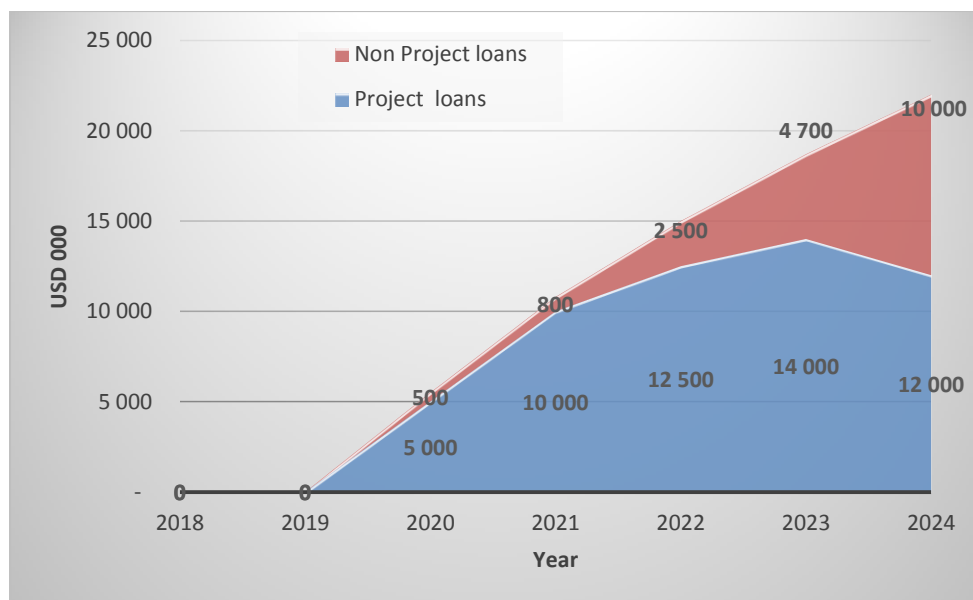
64. PFIs will be selected according to: a) active participation in agro-lending and particularly in the Project target areas, b) reasonable range of financial products to serve the target groups; c) comprehensive agricultural loan appraisal process, c) pre and post loan customer support to borrowers; d) offered interest rate, e) leverage, f) commitment to beneficiaries, g) credit review. Eligible borrowers will be those investing in rural farm and/or off-farm activities in the project target areas. As already mentioned priority will be given to Project beneficiaries, but gradually access would be open to all applicants from the Fergana Valley who intend investments in rural on or off farm activities and cannot meet collateral requirements.

65. The US\$ 9.9 million will be injected in tranches subject to good performance of RGF (full utilization of the guarantee, leverage higher than 5 times, loans targeted to intended beneficiaries and delinquencies lower than 7%). The first tranche of US\$ 3 million will be available for release upon effectiveness and a second tranche of US\$ 3 million one year later (provided the SFSBD is fully functional with appropriate management structure). The ADMP's mid-term review will assess RGF's performance and will determine a release schedule of subsequent tranches. In case RGF does not perform as required (full utilization of the guarantee, leverage higher than 5 times, loans targeted to intended beneficiaries and delinquencies lower than 7%) the remaining funds will be requisitioned and channelled to other Project activities.

66. An indicative credit disbursement schedule is described below, assuming that all tranches will be released, that PFIs will leverage 7 times the amount of guarantees in own capital and that loans are first channelled to project beneficiaries and gradually shifted to all applicants from the Fergana Valley who intend investments in rural on or off farm activities, but cannot meet collateral requirements.



**Figure 3: Indicative credit disbursement schedule guaranteed by RGS**



67. The ADMP foresees three layers of technical assistance to prepare all parties involved and secure a culture of responsible lending and responsible borrowing around RGF. Technical assistance will be provided a) for pre and post loan assistance to borrowers, until repayment; b) for agricultural risk assessment to PFIs and the SFSBD; and c) for defining and improving operating procedures of both the SFSBD and RGF. Borrowers will benefit from pre and post loan, PFI offered, customer support that will ensure a clear understanding of the engagement they are taking by accepting a loan, as well as a succinct assessment of their ability and commitment to repay the loan. PFIs will benefit by technical assistance offered by the project in cooperation with IFC for improving skills and procedures relevant to agricultural credit risk assessment. IFC has developed a relevant software tool (CLARA) and training modules that the Project will put at the disposition of PFIs on a shared cost basis. Finally, the ADMP will provide technical assistance to the SFSBD together with IFC. The IFC has been closely monitoring (for the past few years) all the deliberations relevant to the establishment of the guarantee fund and has often proposed assistance to ensure its suitable design and operation. As the SFSBD is at early stages of development, such assistance will be imperative. IFC intends to engage with the SFSBD once the appropriate structure is at place. Given that RGF will be hosted within the SFSBD the efficient and effective operation of the one will affect this of the other. The ADMP will provide assistance in the development of a monitoring tool that will keep real time information on the status of RGF's portfolio as well as the installation of CLARA in the SFSBD to be able to assess the agricultural risk of this portfolio.

68. The introduction of RGF will provide the necessary security to the banks to extend off and on farm loans in the Fergana valley, thus: (i) improving financial inclusion of the target groups and access to a wide variety of financial services, including savings, investment and working capital loans, insurance and remittances; (ii) encouraging the banks to forge stronger and more permanent links with the Fergana Valley agricultural and rural sector and increase their capacity to identify and properly assess the credit risks linked to rural businesses; and (iii) eventually tailoring new financial products and services for the upland rural communities with focus towards the development of agricultural value chains and the retention of youth.

69. It is expected that an amount of US\$ 9.9 million allocated for RGF would help leverage at least US\$ 49.5 million in loans to the agricultural sector. The value chain stakeholders participating in the Project's Components 1 and 3 (who don't received loans under Component 2) will be given priority in provision of guarantees.

70. The rural guarantee facility will be an example of an innovative approach helping to address one of the most pressing needs in the agricultural sector in Uzbekistan – the lack of collateral for obtaining loans for investment in agriculture.

71. **Sub-component 2.2: Credit lines for agriculture diversification and modernization.** The Project will work with all banks interested in lending to agriculture in the target regions and meeting the Project's eligibility criteria, as well as demonstrating commitment to incorporating local and international best practices in agricultural lending.

72. In particular, Participating Financial Institutions (PFI) will undergo an international due diligence process and will be required to adopt a specialized automated agricultural loan analysis and management system allowing both for loan analysis and agricultural portfolio management and monitoring, as well as business development advice to borrowers. Towards this, the Project will provide up to 70 percent of funding to 7-10 PFIs interested in accessing the credit line from the Project, to integrate this system into PFIs' operational processes. The experience of two IFAD's projects in Uzbekistan – Horticulture Support Project (2012-2017) and Dairy Value Chain Development Project (2017-2022) – has shown that banks continue to rely on collateral in their agricultural lending practices and have not developed internal capacities to provide cash flow based loans and offer repayment schedules based on agricultural businesses' seasonality; they continue to treat agricultural businesses in the same way as other types of borrowers, while their ability to perform solid business analysis also remains limited. Due to the implementation of subsidized government programs, many banks have recently increased their risk exposures to start-ups and other risky categories (such as informal businesses – rural households, etc.). It would therefore be crucial to have PFIs equipped with this modern loan analysis and management tool to mitigate further risks and ensure PFIs' commitment to continue to lend to agriculture and provide tailored, sector-specific products to smallholders and other rural businesses.

73. In addition, the adoption of the automated system will allow for the dissemination of business development advice by PFIs to agricultural borrowers as it contains "technical charts" for various agricultural sub-sectors – checklists outlining key processes and stages in agricultural cycles with specific guidance on their implementation. Thus IFAD's co-funding of the system will not only strengthen the capacity of PFIs to lend to agriculture in a sustainable way, but will also contribute to improving agricultural business management practices by borrowers in an innovative and cost-efficient manner – by using banks as agents delivering business development advice.

74. Credit lines (US\$ 54.8 million of IFAD financing) will be provided to farmers and agricultural businesses in local currency (except for agricultural businesses engaged in export activities with revenues in hard currency). PFIs will be able to establish sustainable interest rates on these loans as well as establish other conditions, yet PFIs' proposals will be evaluated to ensure the selection of PFIs offering the best lending conditions to farmers and agricultural businesses.

75. Loans will be extended in the amounts ranging from US\$ 10,000 to US\$ 500,000 and their local currency equivalents (the categories not covered by subsidized government Projects or Projects of international financial institutions) for all agricultural sub-sectors except cotton and wheat, including both investment and working capital, to about 1,200 beneficiaries, with an average loan amount of US\$ 45,000. **The PFIs will be required to meet the average loan amount target as calculated on the basis of amounts disbursed each calendar year.** At least 30 percent of the borrowers under Sub-component 2 will be women.

76. **Sub-component 2.3: Special credit window for youth.** PFIs will target youth (both men and women) who are underserved by financial services with affordable and flexible lending products. A prior research will be conducted to determine specific needs of this segment as well as current barriers to serving it. The conditions of this window will be defined based on the results of the research. Preliminarily, loans will be extended in the amounts ranging from US\$ 5,000 to US\$ 50,000 (the categories not covered by subsidized government Projects targeting youth or Projects of international financial institutions) for all agricultural sub-sectors except cotton and wheat, including

both investment and working capital, to about 1,000 beneficiaries, with an average loan amount of US\$ 10,000. **The PFIs will be required to meet the average loan amount target as calculated on the basis of amounts disbursed each calendar year.** PFIs implementing this Sub-component will have to comply with the same eligibility and other requirements as those implementing Sub-component 2.2.

77. For both Sub-components 2.2 and 2.3, PFIs will be free to set their own interest rates allowing serving the Project beneficiaries in a sustainable manner; however the PFIs will be selected through a competitive process to ensure that those offering the best conditions are chosen for the Project implementation. PFIs will be eligible to apply for the implementation of both Sub-components 2.2 and 2.3. **For loans issued within Sub-components 2.2 and 2.3, PFIs will not be able to apply for a guarantee under Subcomponent 2.1.**

**78. Innovations and provision for scaling up:**

- a. *New financial products – agricultural loan guarantees.* The project will introduce an innovative Rural Guarantee Facility that will leverage up to 5 times the value of the facility: the US\$ 9.9 million invested will help attract US\$ 49.5 into the agricultural sector of Uzbekistan. IFAD will be a pioneer among international financial institutions to invest in the State Fund and will document and disseminate its experience among other funders, to attract more resources to the State Fund.
- b. *Credit lines with a built-in technical assistance.* The adoption of the specialized automated loan analysis and management system CLARA will ensure that participating banks will build their capacity to lend to the agricultural sector and manage their agricultural loan portfolios effectively and efficiently.
- c. *Banks acting as agents disseminating business development advice.* CLARA contains “technical charts” for various agricultural sub-sectors – checklists outlining key processes and stages in agricultural cycles with specific guidance on their implementation. This will be an innovative and cost-efficient way to contribute to improving agricultural business management practices by borrowers as banks will be acting as agents delivering business development advice which will also be in the banks’ best interests as this will help mitigate some of the credit risks.

### **Component 3: Climate-resilient Rural Infrastructure (CRR)**

79. The Fergana valley occupies only 4% of the total area of the Republic of Uzbekistan. However, more than 20% of irrigated areas (744,000 ha<sup>119</sup> out of total 3,70M ha<sup>120</sup>) are there. This demonstrates significance of the Fergana valley in irrigated agriculture of the country, as well as the importance of the sector in the economy of the valley.

80. Due to arid climate, irrigation is a key condition for cultivated agriculture in the Fergana valley. The existing irrigation infrastructure has been constructed decades ago during soviet period and is comprised of: 825 km of main and 7,375 km of secondary canals (more than 50% are earth canals); almost 40,000 km of inter-farm canals<sup>121</sup>; around 500 irrigation and drainage pump stations<sup>122</sup>; around 8,000 deep wells<sup>123</sup>; drainage network over 462,000 ha comprised of open and closed drains, vertical drainage systems<sup>124</sup> and dozens of reservoirs.

81. Government’s large-scale O&M interventions in the sector so far, have ensured provision of irrigation water for most of the irrigated areas. However, this has been achieved through huge efforts

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<sup>119</sup> Statistical Service Data (2016). Actual irrigated areas in 2016. Total estimated irrigable lands are 912K ha.

<sup>120</sup> Irrigation in Central Asia in figures - FAO, 2012

<sup>121</sup> Irrigation Infrastructure in Fergana Today: Ecological Implications – Economic Necessities.

<sup>122</sup> Improving Water Security: Lessons from IWRM Cases in Indonesia, Nepal and Uzbekistan. Regional Workshop Chiang Mai, Thailand, 17 May 2013.

<sup>123</sup> Transboundary Aquifers of the Fergana Valley: Challenges and Opportunities. IWMI, Central Asia Office.

<sup>124</sup> Statistical Service Data (2016)

to maintain the system operational, which has low efficiency and does not provide sustainable solutions. These are mostly rehabilitation measures of the critically deteriorated infrastructure and are not considering modernization or development of the system, such as shifting from dominantly surface irrigation to water efficient technologies (e.g. drip or sprinkler), which besides water savings, may substantially increase productivity of lands. Almost all main, inter-farm and on-farm canal networks remain open; and they are mostly earth or lined/flume canals with significant water losses and inadequate ancillary structures for efficient water management.

82. The main source for irrigation water in the Fergana Valley is the Syrdarya river. It starts in the Fergana Valley after merging of Narin Darya and Kara Darya rivers that are formed in the Kyrgyz Republic with average annual flow<sup>125</sup> of about 17Bm<sup>3</sup>. The Syrdarya river after the Fergana Valley flows into Tajikistan, then again Uzbekistan and lastly Kazakhstan. Water use from the Syrdarya river is regulated by international agreements. The valley has also other smaller sources for irrigation such as tributaries of the Syrdarya river and ground water. The latter is widely used wherever it is available.

83. Annual water intake for irrigation in the Fergana Valley is estimated at 10Bm<sup>3</sup>. Considering the losses in the network (30%-40%), this is still sufficient for irrigation of over 900,000 ha of lands in the valley. However, water is not equally available at different locations. Lands located near the main canals and water sources are over-irrigated, while the remote located lands at the tail sections of systems are generally suffering from inadequate supply and water shortage. This is the result of deteriorated infrastructure; lack of adequate ancillary structures for water management and distribution; wide application of surface/furrow irrigation, known as the most water consuming method, resulting in overall highly inefficient use of resources; and general lack of capacity in application of appropriate irrigation practices.

84. Efficient use of water resources is also critical to address challenges of climate changes. As per the last assessment<sup>126</sup> with long-term forecasts to 2050: air temperatures are expected to increase by 3°C, water flows in the Syrdarya river in the lower flows will reduce by 22%-28% and water demand will increase by 3-4% as a result of increase in evaporation. Precipitation in the Fergana Valley are expected to remain in the same range by 2050, however with definite shift of vegetation to winter season. Because of estimated half reduced glaciers (about 10% of water source for the Syrdarya river) rivers' flow will increase during the flood season (April-June), while significant reduction will be observed during the highest demand season (July-September). There are also predicted more frequent extreme droughts, floods, extremely cold and hot temperatures. These projections will have substantial negative impact on cultivated agriculture.

85. To overcome challenges of the climate change and to reduce vulnerability of cultivated agriculture of the country, the Government of Uzbekistan has undertaken specific measures to encourage application of water saving technologies. Particularly: farms which are equipped with drip irrigation network are exempted from land taxes; a gradual plan for diversification from cotton (which has high water demand) to high value crops, e.g. horticulture, vegetables, melons, has been adopted; local governments (*hakimiats*) have developed 5 year plans for gradual increase of farms with modern and efficient irrigation equipment; privileged loans are available in the market encouraging agriculture initiatives including installation of modern irrigation systems.

86. Considering these privileged conditions and benefits of drip irrigation systems (efficient use of water and improved productivity and quality of produce), a number of big farmers in the Fergana Valley, have established intensive gardens and vegetable farms during the last years.

87. Out of total 744,000 ha of lands cultivated in the Fergana Valley in 2016, over 100,000 ha have been shared by over 1,47 million *dekhan* farms<sup>127</sup> (on average 680m<sup>2</sup>). Around 630,000 ha of lands have been cultivated by over 18,000 private farmers (average farm size 34ha). To date *dekhan* farms

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<sup>125</sup> Improving Water Security: Lessons from IWRM Cases in Indonesia, Nepal and Uzbekistan. Regional Workshop Chiang Mai, Thailand, 17 May 2013.

<sup>126</sup> ABD: Climate Change and Sustainable Water Management in Central Asia (2014).

<sup>127</sup> Environmental Assessment, the Fergana Valley Water Recourses Management Project, Phase II.

are involved mainly in production of fruits and berries (with more than double higher yields comparing to other farms). Occupying around 13% of cultivated lands, *dekhans* farmers produce some 20-25% of the overall agricultural production of the valley.

88. The CRR component is designed to reduce vulnerability and anticipated impacts of climate variability through investment in improved tertiary irrigation network of public use that would be undertaken in close partnership with the project area WCAs, AISC to support activities under Components 1 and 2. The main selection criteria will be tertiary canals that enhance the opportunities for *dekhans*, agribusiness and rural enterprise development. It will not be a stand-alone component from which any irrigation canal or structure could be financed. All cases will have to demonstrate the commercial viability of the proposed venture, of which the irrigation investment is a link, and its capacity to increase climate resilience and economic opportunities. The allocation of funds will be done through a highly participatory and demand-driven decision-making mechanism, supported by a selection/ranking procedure.

89. Through modernization of the tertiary network, the Component will provide the opportunity for *dekhans* and small private farmers to connect to pressurized network. As the main section of the pressurized tertiary systems including pump stations/wells, filters, mains and sub-mains (the so called "public" part) will be constructed with project funds the only investments required from the beneficiaries will include some sections of laterals and field piping. This will significantly reduce required investment cost for smallholders (could be financial sources provided under Component 2) and will allow them to benefit from the application of modern irrigation practice.

90. The CRR component will consist of two sub-components:

91. **Sub-component 3.1. Modernization of irrigation systems.** The following main activities are considered within this Sub-component:

- (i) Upgrading selected tertiary systems in the Project area to provide pressurized and filtered water to agricultural plots, which will allow *dekhans* and small private farmers to install drip lines on their farms and connect to the system.
- (ii) For demonstration purposes, introduction of five solar-powered meteorological stations for online monitoring of climate data, soil moisture, estimation of crop water requirements and irrigation scheduling over 500 ha (100 ha per station).

92. From the technical point of view the following options will be considered for modernization of inter-farm irrigation systems: (i) replacement of open inter-farm concrete flumes or earthen canals with closed irrigation pipes to provide pressurized and filtered water; (ii) reconstruction of deep wells connecting to pipe network; (iii) installation of electrical or portable diesel pumps and pipe network.

93. **Replacement of open inter-farm parabolic flumes (canalette) or earthen canals with closed irrigation pipes** is considered for the following cases: (i) the canal has gravity inclination 30m and more which can be used to get pressure for below located lands without additional pumping; and (ii) synergies with other projects with rehabilitated pump stations and deep wells. This is the most cost effective option, as it doesn't consider additional electromechanical equipment (e.g. pumps, electrical panels, etc.) to get pressure. Tentatively 1,350 ha with 10-15 schemes (the number will be dependent on the size of the schemes) will be considered by the Project.

94. **Reconstruction of deep wells connecting to closed distribution network** is proposed for currently operated deep-wells which are the main water source for farmers and who express interest to modernize their inter-farm distribution system and install drip irrigation network. Among the expected benefits of these applications are: (i) almost halving water consumption because of eliminated water losses in the distribution network and efficient use of water; (ii) reduced costs for operation because of substantial savings of energy; (iii) positive impact on the environment because of reduced water extraction. Tentatively 14 such applications are estimated for rehabilitation with a command area of about 1,400 ha.

95. **Installation of electrical or portable diesel pumps and closed pipe systems** will be considered for sites where there are no other technical solutions to get pressure in the system. At

sites where there will be access to electricity, electrical pumps will be considered, while for sites where electrical supply will be complicated, a provision will be made for diesel pumps. Tentatively 1,000 ha with 14 schemes are considered.

96. Main criteria for the investment decision will be:

- (a) verified direct link to supporting inclusive rural economic growth including in the value chain supported under Component 1;
- (b) public infrastructure of common use;
- (c) technical feasibility;
- (d) financial viability;
- (e) sound and plausible operation and maintenance procedure elaborated;
- (f) consistency with nationally applicable regulations on environmental impact.

97. **Solar-powered meteorological stations** are modern tools to monitor soil moisture and relevant climatic conditions for determination of crop water requirements and irrigation scheduling that will increase productivity of crops. Five different pilot areas will be selected for demonstration covering about 500 ha.

98. Advantages of introducing of meteorological stations include but not limited in demonstration of: (i) efficient use of irrigation water by adequate assessment of water requirements and modeling of irrigation applications; (ii) improved yields due to provision of permanent moisture for the roots and stress-less conditions for crop growing; (iii) savings of fertilizer through monitoring of nutrients and optimized use of fertilizer; (iv) plant health through ability to stimulate root development, frost protection and prevent from diseases; (v) energy savings through optimizing operation of pumps. Proposed technical specifications for the agro-meteorological stations are provided in Annex 3 to Appendix 4.

99. **Sub-component 3.2. Increasing capacities of WUAs and AIS to operate modernized irrigation systems.** WCAs and BAIS regional and district divisions' (AISs) adequate capacity is a key for efficient water management and sustainable operation of modernized irrigation networks. Therefore, it is a key to ensure that the WCA and AIS are provided with relevant training in operation, maintenance and management of modern irrigation systems as well as on efficient water management practice.

100. Since independence the water resources administration based on basin water management and hydrological unit principle. As a result, in 2003 the BAISs were established, composed of the Authorities of the Main Canals, Divisions for Operation and Maintenance of Pumps Stations, and Authorities of Irrigation Systems. Overall ten BAISs have been established and are currently operating in the Fergana Valley.

101. Distribution of water at the tertiary canal level is managed by WCAs. There are overall 365 WCAs operating in the Fergana Valley including: in Namangan Region - 134 WCAs; in Fergana Region - 126 WCAs; and in Andijan Region - 105 WCAs. The average size of WCAs is around 2,000 ha. Farmers pay fees to the WUAs for services dependent on the size of their cultivated farms. The fees range from UZS 12,000 to 20,000 per hectare, which is not sufficient for adequate operation of the WCAs. Consequently, the operations of WCAs are not at adequate level and in most of the cases undertaken by AISs. Particularly, one water master serves up to 1,000 ha, which is too high for deteriorated and complex infrastructure.

102. Modernization of the irrigation network at the tertiary level for provision of pressurized and filtered water, will increase the role of WCAs in systems operation and management as it will simplify water distribution. The role of WCAs will also increase as it is supposed to play the major role at the schemes selection stage as the applicant for investment proposals.

103. To build capacities in the selected WCAs and relevant AISs to operate and maintain the modernized irrigation systems, estimated 10 training sessions will be conducted by the Consultant

(responsible for design and supervision of modernization works), for the staff of 20-30 participating WUAs and relevant AISs (the actual number will depend on the applications). These trainings will be conducted after completion of works based on the actual systems constructed. In addition to this, some five trainings will be arranged by the supplier of agro-meteorological stations for 5 WUAs to operate these stations at five pilot areas.

104. The CRR component total budget valued at US\$ 7.9 million. The total sum includes USD 7.8 million for Sub-component 3.1 and US\$ 0.1 million for Sub-component 3.2. Besides investment in works this include about US\$ 0.8 million for consultancy services for selection of schemes (2% of investment cost), development engineering design (6% of investment cost), independent review and environmental assessment of technical designs (1% of investment cost) and supervision of works (3% of investment cost). The total allocated funds consist of about US\$ 6.6 million from IFAD loans (83%) and US\$ 1.3 million Government contribution for VAT (17%).

105. Based on the review of recently completed similar systems under the World Bank and GEF funded Rural Enterprise Support Project – phase II (RESP-II) and Sustainable Agriculture and Climate Change Mitigation Project (SACCOMP), the indicative per hectare cost for drip irrigation systems for farms of 10-20 ha and more may vary between US\$4,000 to US\$5,000 per ha. This includes construction of all necessary structures and equipment such as regulation basins, pumps, filters, mains and sub-mains, laterals and field piping. Assuming that the cost of laterals and field piping (to be funded by farmers from their own resources or through the component 2) is about 25-30% of total investment, an average cost of US\$ 4,000 per ha for main structure is assumed for budgeting purposes.

106. The cost of the civil works listed above include Value Added Tax (VAT). In line with the market prices in Uzbekistan, the cost for engineering design and construction supervision will be 5-7% and 2-3% of the total cost of construction respectively. Additional 1% of construction cost is allocated for independent design review and environmental assessment of technical designs as per the requirements of legislation of Uzbekistan. Some 2% allocated for selection of schemes and baseline surveys of the selected areas.

107. The cost of communications, information campaigns, staff salaries and allowances and equipment and vehicle operational costs will be incorporated into the entire Project operating budget.

108. The above figures are indicative only, based on the costs of similar drip irrigation systems constructed recently in Uzbekistan. There will be no pre-defined allocation for districts or WCAs in the Project area. The infrastructure investment proposals ranking criteria will ensure that funds are allocated where the goal of addressing the overall Project objectives and improving livelihoods and economic growth in disadvantaged targeted rural communities.

109. The anticipated outputs from the CRR component implementation are as follows:

Output	Indicators
Output 3.1: The inter-farm systems are modernized	<ul style="list-style-type: none"> <li>▪ Over 1,000 <i>dekhan</i> and small private farmers cultivating some 3,500 ha lands will get conditions to connect to pressurized and filtered water source and install drip irrigation system on their lands at affordable prices;</li> <li>▪ At least 3,500 ha will shift from low income crops to high value crops;</li> <li>▪ Water consumption on the Project area lands will be reduced by estimated 15 Mm<sup>3</sup> contributing to efforts against climate change and droughts;</li> <li>▪ Over 6Mw of electricity will be saved annually thanks to reduced water consumption and reduced water losses of pumped water;</li> <li>▪ State of the art agro-meteorological stations will provide critical information for efficiently sequencing irrigation and applying necessary for the crops irrigation substantially increasing productivity of lands.</li> </ul>
Output 3.2: WUAs and BAIS division staff trained	<ul style="list-style-type: none"> <li>▪ At least 30 representatives of participating WCAs and BAIS regional and district staff will be trained in efficient operation and maintenance of systems and therefore will provide sustainability of Project investments;</li> <li>▪ Trained operation staff will provide reliable water supply for farmers enabling appropriate conditions for farmers to get high yields.</li> </ul>

110. In addition, the construction works associated with CRR1 Component will have a direct impact in terms of temporary employment generation, as it is a common practice among local contractors to hire unqualified labour from the villages. Estimated 15% of the cost contracted works are used for construction related employment as a rule.

111. The main expected outcome is a provision of enabling conditions for *dekhan* and small private farmers to adopt innovative water efficient irrigation techniques on their farms and to shift from low income crops to high value crop production.

112. *Complementarity with other projects.* Along with the state budget annual interventions in systems' operation and maintenance, the Government of Uzbekistan with support of international donors has implemented a number of projects for rehabilitation of critically deteriorated infrastructure including main canals, major pump stations, deep wells, drainage network, etc. Among them the biggest intervention in the Fergana Valley has been the WB-funded Fergana Valley Water Management Project (Phase I), which now is going to be continued with Phase II<sup>128</sup> to cover more districts in the valley. This will certainly provide opportunities for synergies between the two projects.

<sup>128</sup> Project approval by the WB Board is expected in June 2017.



## Annex 1: Value Chain Development Plan Selection Process

For each ADMP identified LE interested to enhance his/her business, a Value Chain Development Plan (VCDP or VC Roadmap) would be prepared by experienced private sector business specialists, including all envisaged activities within the value chain. The VCDP analysis would include: (i) a situation analysis including a detailed assessment of expected smallholder farmers' participation; (ii) opportunities to upgrade; (iii) constraints to upgrading; and (iv) recommendations on what can be done practically and what instruments to use. The VCDP would list the potential types of investments eligible for ADMP support. Associated value chain capacity building investments financed, e.g. training of farmers or enterprise staff/management, organizing farmers into groups, etc., would also be identified and financed directly by the ADMP. A proposed process of preparing a VCDP is presented in Attachment 4.1.1. A sample VCDP is provided in Attachment 4.1.2 based on the actual example from the DVCDP.

The VCDPs will be evaluated by the PMU against the following but not limited to criteria:

- number of established productive partnerships;
- number of involved small private farmers and *dekhans*, women occupying managerial positions and employed youth;
- mitigation of side-selling, especially the incremental returns for smallholder producers;
- biosecurity and food safety gains
- neutral or positive environmental impact.

Final selection will be made by a panel of external persons (five to seven members), including those from the private sector, industry associations, and relevant projects with good track records such as USAID's Uzbekistan AgLinks project.

Following the selection phase of VCDPs, eligible packages might be submitted to Participating Financial Institutions (PFIs) that meet IFAD due diligence requirements (further details under Component 2). Sequencing of VCDPs' implementation will be based on a first come - first serve principle.

Only legally registered societies and companies (LLC or LTD) would be eligible to act as LEs for the ADMP supported value chain development. Due diligence would be performed and entities that are the subject of bankruptcy, criminal investigation, fraud, corruption or are in default of contractual agreements would be ineligible. Incremental *dekhans*/small private farmer income and jobs, value added products, and productivity and market access and gender equality would be important criteria in investment proposal evaluation, together with commercial viability, environment impact and cost effectiveness assessments. The investments would be underpinned by a technical, business management, accounting and Information Communication Technology (ICT) capacity building Project for participating enterprises with a view to improving their farmer service capacity, profitability and enterprise linkages, both at local level and to upstream quality suppliers and markets. Farmers would receive training in crop/livestock husbandry, health and nutrition, fodder production and other technology innovations, environment protection and in "farming as a business".

The VCDPs should also provide: (i) a chart/map indicating the number and location of supplying *dekhans* and small private farmers; and (ii) a chart presenting the time line for all activities to be supported by the ADMP, that would also identify the responsible party, place and time and how it is measured.

Legal leading entities eligible to apply for ADMP financing include: (i) sole proprietor/individuals; (ii) cooperative societies/associations; (iii) partnership; and (iv) companies. Eligible entities should be able to provide the following documents:

- Business License
- Certificate of registration and extract from Registry

- Annual tax Return Report (2 years for existing entities)
- Statutory Chart
- Permission for the ADMP to collect information from trade partners.

None of the above entities shall be eligible for support under the following circumstances:

- Having gone bankrupt or being liquidated; having its operations managed by courts; signing agreements with creditors, having its operational activities suspended; being subject to procedures concerning these matters or being in a condition due to a similar situation as per national laws or arrangements;
- Being sentenced for offences related to their own business which cannot be appealed;
- Being convicted of gross abuse related to business matter;
- Non performing obligations related to the payment of social security contributions or tax payments in accordance with the legal provisions in Uzbekistan;
- Being subject to adjudication due to being involved in fraud, corruption, a criminal organization or other illegal activity, which cannot be appealed.

The ADMP will not finance the following expenditures:

- Leasing of equipment, land and facilities;
- Bank charges, cost of guarantees and similar charges;
- Value of intellectual property rights;
- General costs involved in an investment Project proposal development/design (architects', engineers', consultants' and general legal fees, and costs for acquisition of patents and licenses, etc.).

The development of a VCDP would not be a guarantee of ADMP financing. VCDPs would be evaluated by the PMU against key Project indicators and only those VCDPs meeting minimum ADMP requirements would be used as a framework for preparation of individual Credit Projects (CPs) to be further forwarded to PFIs for consideration of CPs. It will be solely PFIs' decision to whether finance or not to finance all or part of the CP private good investment.

### **Attachment 4.1.1. PROCESS FOR PREPARING A VC DEVELOPMENT PLAN**

#### **Step One: Data Collection**

The value chain analysis team first conducts gender disaggregated background research on the expected raw products catchment area, reviewing the structure of crop/animal production and processing in the catchment, the availability, type, quality and use of agricultural land, market demand and public and private institutional and financial support. After a thorough review of relevant secondary sources, the team conducts primary research in the catchment through a combination of one or more of the following methods: interviews of male and female farmers, focus groups, surveys and observation. Through this process which takes approximately 1 week in the field, the team gather more information on the value chain including the actors (*dekhans* and private farms, SMEs – processors, input suppliers, advisors, financial institutions, etc.), the relationships between the actors of the chain and factors affecting the competitiveness of the chain.

#### **Step Two: Value Chain Mapping**

By using the information gathered during interviews as well as secondary research, the value chain analysis team develops the map of the value chain. Value chain mapping enables the analysis team to visualize the flow of the product from conception to end consumer through various actors, as well as the supporting markets and enabling environment affecting the value chain. The first step is to list all the functions and actors in the value chain.

- *Who are the actors in the commodity value chain?*
  - Input suppliers and service providers (companies who sell inputs and services to farmers)
  - Producers (male and female farmers)
  - Small-scale traders
  - Small-scale processors –local sale
  - Medium/large-scale processors-national sale
- *Functions may be performed by more than one actor, and each actor may perform more than one function. What are the functions in the commodity value chain?*
  - Input and service supply
  - Production
  - Trading
  - Processing
  - Exporting
  - Importing

Once they are identified, the functions and actors are placed in a matrix to show who does what. *List* the functions along the side and the actors across the top and mark the boxes to indicate which actors perform which functions. Once this table is complete, a map can be drawn showing how the product moves from one actor to another and when it passes through the different functions. Based on the map it is possible to establish the cost and margin make-up for each level the produce passes through, to be used as the base line for present distribution of cost and benefits among actors.

#### **Step Three: Analysis of Opportunities and Constraints**

The next step would be to prepare a table like shown below, list the structural and dynamic factors in the value chain, and then briefly describe the current situation, opportunities, constraints and recommendations for addressing the constraints including tangibles: How, Who and Financing.

Framework	Situational analysis	Opportunities for Upgrading	Constraints to Upgrading	Recommendation for Upgrading Constraints (How, who and financing)
<b>Structural Elements of the Value Chain</b>				
End market				
Business enabling environment (both soft and hardware)				
Vertical linkages				
Horizontal linkage				
Supporting markets				
<b>Dynamic of the Value Chain</b>				
Value chain Governance				
Inter-firm Relationship				

**Step Four: Prepare Brief Sample Business Models for Each Recommended Upgrading showing the expected Results of the Upgrading**

This step included technical description of the upgrading, financial analysis, economic analysis listing all the incremental estimated forecasts e.g. increased farm household income, number of households benefiting; job creation; import substitution; etc.

This step should also include the preparation of a matrix showing the current cost and benefit make-up and profit distribution along the value chain and an evaluation of change in governance after upgrading.

**Step Six: Stakeholders Workshop**

The stakeholder workshop brings together key actors from various levels in the value chain to vet the findings of the analysis and discuss if the chosen strategy for increasing value chain competitiveness is valid.

NOTE: The VCDP should be as precise and concise as possible, not exceeding 6 pages. Please refer to the Rapid End Markets Assessment (September 2017) for good example how to structure a value chain map.

## Attachment 4.1.2. SAMPLE VALUE CHAIN DEVELOPMENT PLAN

**1. Profile of Leading Entity.** The “Sanzar” company was established in 2001 and successfully produces sour-milk products (6 items) for marketing in the region and capital. The company management plans to strengthen its positions in the market in particular by increasing of the company’s processing capacity from 5 to 50 tons of milk per day and radically improving the package quality and design.

**2. Competitors.** There are 6 milk processing enterprise and 10 informal shops (so-called "homemade") in Dzhizak region. The last ones are not considered as competitors, because they are operating with small capacity and by increasing consumer awareness of food safety their market share is rapidly decreasing., The principal competitors of the applicant company are primarily the Dzhizak processors (“Choq Moq”, “Samandar”, “Lactomilk”, “Davv-M”). Their capacity varies from 0.5 to 2 tons of milk accepted for processing per shift. Also, the tough competitors are companies from Samarkand, which have attractive package, sufficient volume of production (for working with trading networks) and well-working dealers.

### Photo 1 - Kefir in the retail trade of Dzhizak

Samandar (Dzhizak)	Agro Bravo (Samarkand)
Retail price: 4667 UZS/l	Retail price: 4200 UZS/l



**3.** The modern format of retail trade is rapidly developing. There are many grocery stores in Dzhizak city. In Zaamin (60 km away from Dzhizak) a “korzinka.uz” supermarket will be opened soon.

**4. The raw-material zone of the company.** If there are no specific problems with the marketing of products (the company also delivers its products to the capital), the raw material base of the plant is the weakest point for company development. It is not only weak due to the strong fragmentation of suppliers (DFs owe 96% of cows), low milk yields, strongly marked seasonality of milk yields. The fact is that Samarkand and Tashkent processors, who practice a higher purchase price (+ 20%), are also collecting milk from Dzhizak region. So, within the region’s milk collection structure, Tashkent collects 2 tons of raw materials, Samarkand-2 tons, black shops – more than 2 tons, the remaining 4 tons are distributed among the region’s plants.

**5.** Milk quality and its collection are unfavourable. Sometimes companies have to travel to neighbouring areas for raw milk to fulfill orders of retail chains.

**6.** Currently the company is buying milk within a radius of 15 km in all directions from Dzhizak city. Marginal cost of milk collection makes 250 UZS per liter of milk. The most part of the raw material is the collected milk of III grade, obtained through the collectors from HF. There are only 10 private farms among the suppliers, on average, each of them has 35 milking cows and yield is 320-380 liters

of milk per day. The average yields on farms are low, despite the availability of thoroughbred cattle (black-and-white): about 10-12 liters.

**Table 1 - Structure of procurement of the company's raw milk**

	Condition for 2016/17		Expected structure of purchases	
	Winter	Summer	Winter	Summer
Private farms (PF)	100%	20%	70%	40%
<i>Dekhan Farms</i> (DF)	0%	80%	30%	60%

7. The proposal was designed very timely, as the local processor is in desperate need of improving its raw material zones and marketing skills in order to strengthen its market position, thus providing a stable distribution channel for its raw milk suppliers and creating jobs for the region residents.

**8. Milk collection organization.** Company works with PF directly, by taking milk daily by its milk delivery truck at each farm. To collect milk from the private sector (from DF), the company has 4 milk collectors. They are private entrepreneurs, leading the collection of milk (from 5 to 20 liters) and paying for milk in cash, usually once a week.

**9. Purchasing price of milk.** Raw milk makes about 80% of the cost of finished products. The company realizes that a considerable part of the value added of raw milk is taken away by the secondhand dealer, therefore, it wants to radically change its milk purchase system, by giving part of the dealer's profit to *dekhan* and establishing milk collecting points to improve milk quality.

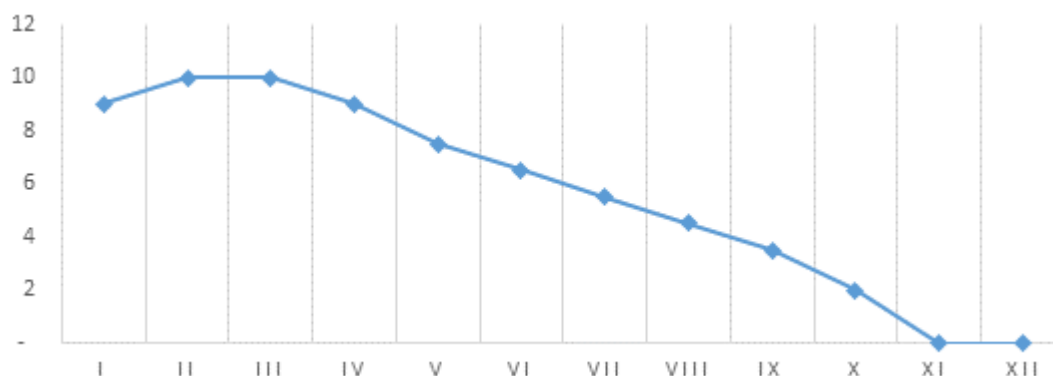
**Table 2 – The plant's purchase price in region**

Amount per milk kg (basic fat content 3.6%). unsorted milk (III grade)

	Winter 2016/17	Summer 2017	Winter 2017/18 (Outlook)
Local processor	2000	1600	2200
Tashkent processor	2400	2000	2600
Samarkand processor	2200	1800	2400

10. Currently, the secondhand dealer pays *dekhan* UZS 1300 per liter of raw milk, by this means creating about 300 UZS of value added per liter of collected milk. On average *dekhan* keeps 2 cows, giving about 1300 liters of milk per year.

**Chart 1 - Average daily milk yield in private households**



11. To ensure the workload of the expandable capacities the company plans to introduce a new dosage line for 50 tons of milk per shift.

12. Logistics is a critical point in organizing raw milk collection. Three following parameters are restrictive: (a) Maximum delivery distance of raw milk: 60 km (at large distances, proteolysis occur); (b) Maximum delivery cost: UZS 250 per liter of transported milk; (c) Milk collection points should have a stable supply of electricity, drinking water, connection to sewerage.

13. To optimize the development of MCP network installation plan, the company has conducted a survey of its suppliers and made an accurate mapping of the potential raw material zone. It was found out that 3 out of 10 farmers supplying milk also want to develop, and that there is a sufficient concentration of breeding stock in 12 villages where are located former collective farms, 10 of which have access to pastures.

**Table 3 - Expected effect of proposed activities to strengthen the plant's raw material area**

	Without the project (2017)	With the project
Number of PF– milk suppliers	10	15
Number of secondhand dealer – milk suppliers	4	0
Number of DF– milk suppliers	200	700
Average milk yield in PF l/day.	10	15
Average milk yield in DF l/day.	5	7

**14. Project activities** for strengthening of raw material area, financed by the processor, the project (training) as well as the suppliers and include the following:

(a) Creation of 10 **milk collection points** (MCP) with cooling tanks (refrigerators) (1/group) to collect milk in villages directly from DF.

(b) Training and supervising, through Milk Procurement Department staff, by the best methods of dairy farming of its suppliers (PF and DF), in particular

(i) Prevention of blood-parasitic diseases;

(ii) Proper balancing of ration;

(iii) Hoof trimming and clearance;

(iv) Treatment of limping

(v) Prevention of hoof disease

(vi) Improvement of pastures through sowing of sainfoins and harvesting of weeds and poisonous plants.

(c) The financed activities are aimed at:

(i) increasing the income of raw milk producers, especially DF;

(ii) encouraging the consolidation of farms;

(iii) increasing milk yield and productivity of dairy herd;

(iv) smoothing seasonality of milk yield in the private sector (for DF);

(v) ensuring a temperature regime and proper quality control of raw milk.

(d) With an excess of processing capacity and a shortage of raw milk, there may be an increase in milk purchase price, in the absence of an improvement of its quality and/or growth in the amount of milk collection from one supplier, as well as unfair competition for raw materials. For example, if one plant does not accept sour milk or milk with an antibiotic, and another plant - accepts. The raw material base is the basis for successful processing.

(e) The main investment from Sanzar in its role of a leading enterprise is the creation of a network of milk receiving points and the agrarian support to its suppliers, who will preliminarily be trained in organized training under the Project.

(f) Creation of the **milk collection point's** (MCP) network from the plant (10 points) will allow to attract more DFs to the corporate channel of the VC from 200 to 700 families. For delivery of milk to MCP, the dealers will receive UZS 200 per liter more (since the secondhand dealer is no longer in the scheme). Milk received from morning and evening milking will be immediately cooled to 4C, as required by the technical regulations, which will increase the yield and quality of the finished product.

## Annex 2: Farmer Field Schools

Farmer Field Schools (FFSs) have been practiced for nearly 25 years, first in Asia as a platform for extending Integrated Pest Management methods in rice growing areas, and now widely spread on all continents in developing countries, dealing with crops, horticulture, livestock and fisheries. References and links are provided at the end of this summary document.

The FFSs are a farmer group-based learning process that brings together concepts and methods from *agroecology*, *experiential education* and *community development* using adult education methods, practical learning using farmer-livestock owner fields or herds as the ‘classroom’ and the curriculum. Aside from extending better crop raising and livestock husbandry practices, FFSs have produced other developmental benefits that are broadly described as *empowerment*.

It may be useful to explain what the FFS approach is not. *It is not* a one or two farming technologies extension activity. But it is a practical, in-field or herd, community-based farmer-led group learning process to solve area-specific, multifactorial crop and livestock raising problems.

*FFSs are not top down, single farming or herding technology issue oriented.* But they help solve common, multifactorial, integrated crop and livestock raising issues in farmers’ fields or herds and over the entire cropping season or life-cycle of livestock or the marketing cycle. Farmer groups learn by doing and the schools are people-centered not commodity centered.

The *fundamental elements of a FFS*<sup>129</sup> include:

- **GROUP** – up to 25 smallholder farmers/livestock owners meeting weekly (usually) for at least one production cycle
- **FIELD** – the farmers’ field or herd provides most of the study materials and puts the FFS ‘students’ right in front of the real problems and solutions
- **FACILITATOR** – s/he is a skilled farmer or entrepreneur who generally lives in the same neighbourhood or mahalla with the FFS farmers
- **STUDY TOPICS** – focus on agronomy, irrigation, pest control, fertilization, animal husbandry, animal health, animal/fish nutrition, harvesting, processing, forestry or social issues
- **PROJECT COORDINATOR** – s/her supports Facilitators’ training, coordinates them and organizes all materials needed for the weekly training sessions
- **FUNDING** – costs vary but usually fall between USD50 -75 per farmer per season
- **SYNERGY WITH GOVERNMENT AUTHORITIES** – synergy and collaboration are decisive for sustainability of FFSs and for the effectiveness of the Project

In a typical FFS a group of 20-25 farmers meets once a week in a local field setting (household or *dehkan* farm) under the guidance of a *trained facilitator*. In groups of five they observe and compare two plots over the course of an entire cropping season. One crop plot or group of livestock follows local conventional growing methods while the other (crop or livestock) is used to experiment with what could be considered “best practices”. Farmers experiment with and observe key elements of the agro-ecosystem by measuring plant or livestock growth or production, taking samples of insects, weeds and diseased plants, feces for parasite eggs, and constructing simple cage experiments or comparing characteristics of different experiments. At the end of the weekly meeting they present their findings in a plenary session, followed by discussion and planning for the coming weeks.

Alternative practices are not automatically assumed to be superior to conventional practices. It is up to the farmers to decide – and be convinced - what works best through his or her testing and observations. What the FFS does is provide a risk-free setting in which to discuss, dissect, modify and experiment with new crop or livestock growing ideas.

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<sup>129</sup> From slide presentation by Mr. Yagnesh Sondarva. See reference at end.



In this field- or herd-based setting, farmers are able to investigate a wide range of topics, such as management of soil fertility and water use; methods of local varietal selection and issues of seed quality; *risks associated with toxic pesticides*; new animal feed mixes, feeding and watering practices, new animal species or breeds; integrated pest management practices; implementation of low-toxicity alternatives; *development of marketing skills*; and diversification of farming systems with new crops, livestock or fish for food, fodder and profit.

At a national and regional scale, the list of topics for FFSs continues to expand. The *learning-by-doing approach promotes farm-based experimentation, group organization and decision-making*; thereby increasing the likelihood that farmers will “own” and adopt improved practices.

At the end of the season, a typical FFS group holds a field day to show local politicians, government agriculture workers and other farmers what they are doing. Exchange visits with other FFS are also encouraged. The season-long approach helps build stronger social ties that carry on after the initial FFS.

Not all topics can be addressed in one season and FFS groups often continue with new topics and activities in subsequent seasons. Exploring past trends, current status and future scenarios helps groups to prioritize needs, interests and actions for the future.

FFS national Projects are more than just a collection of FFS. They typically work at multiple scales to build social capital, for example by helping strengthen producer organizations and by contributing to greater organizational capacity along the entire value chain – from financing, post-harvest processing and marketing, to investments.

The Food and Agriculture Organization (FAO), the European Union, along with some universities, government institutions and NGOs have long been involved with designing, adapting and implementing FFSs. The European Union and FAO held a widely attended consultation in 2016 to summarize FFS practices, results and outcomes which are published in the *Farmer Field School Guidance Document: planning for quality Projects*. Key findings from this document follow below.

There are now over 12 million FFS smallholder family farmer graduates, but what drives the results is not the quantity of attendees but the *empowering quality* of the process and how it enables participants to continue to grow, using new skills and knowledge. FFSs provide structured opportunities and space where farmers, pastoralists and fisher-folk understand, co-create and adapt knowledge, science and technical tools; *they are active participants in the process and they are respected*. Their experience and thoughts are valued by the group and in their communities — a new experience for many, particularly among the women participants. These farmers, herders and their communities make better choices, facilitate innovations and adaptation of alternative solutions when facing new problems. FFS Projects bring together different actors in farmers’ fields or in pastoral or aquatic production areas, from local scientists to local governments to community organizers, working together with small-scale producers to analyze and address complex, multifactorial problems and increase resilience of local agriculture production and local communities.

FFS are tailored for farmers to understand and *track local agro-ecosystems* and, based on their understanding of these technical monitoring tools, *improve their understanding of options and their decision-making*. For example, farmers in Andhra Pradesh, India, make better decisions on which crops to grow during the dry season based on their new knowledge and monitoring of ground water availability; in Bungoma, Kenya, on the local field resistance of modern maize varieties to epidemic virus disease; in Central Java, Indonesia, on the potential impact of insect pests on crop yield based on predator-pest ratios, and in Himalayan Nepal, on the enhancement of high value fruit and vegetable production by conserving pollination services from domesticated and wild pollinators. FFSs play an essential role to ensure sustainable food production at local and national levels.

FFS Projects are often seen to fall under the domain of extension services. However, to evaluate the role and function of FFS in extension it is important to understand how the description and practice of agriculture extension has changed over the decades. From the 1980s and for more than two decades, most countries in the developing world embraced the *Training and Visit system*, which was built on the concepts of diffusion of innovation and transfer of technology from scientists to farmers using an

essentially one-way mode of communication. However, in the wake of a number of large impact studies this concept is nowadays largely considered a failed system (Anderson et al., 2006)<sup>130</sup>. In many situations the dissemination of standard packages of inputs and practices and blueprint recommendations are now thought to be inappropriate. In the past national priorities of increased production (often to feed urban consumers as part of economic development strategies) led to top down extension systems that did not help farmers sufficiently to solve new and emerging problems, nor to improve and adapt technical innovations to their local conditions. Even less so did these commodity-centred – rather than people-centred – Projects build strong, responsive and adaptive local institutions that could improve smallholder farmers' livelihoods by better leveraging market opportunities. *There is now general recognition that sustainability of the agricultural improvement process is not necessarily to be found in the technologies introduced, but rather in the social process of active farmer-managed innovation, adaption and dissemination of ideas where farmers manage and coordinate ecological processes* (Leeuwis, 2004)<sup>131</sup>. Appropriate technological solutions will vary depending on local circumstances and therefore understanding of the specific context is essential, requiring knowledge that is complex and diverse. While past extension was seen as mainly an act of transferring technologies to farmers, *there is thus now a growing focus on farmer participation in the innovation process and on the facilitation of experimentation among communities*. Based on this new focus on dialogue and rural innovation in extension activities, Leeuwis suggests *Communication for rural innovation* as a more appropriate term for agricultural extension. Increasingly, extension services are provided by multiple actors, including various types of producers' organizations, NGOs and private sector providers, thus creating a need for 'platforms' for learning among actors, often referred to as Agricultural Innovation Systems.

Farmer field schools build heavily upon the principles of adult and non-formal education, experiential learning, and emancipatory learning. These concepts were successfully applied in the fields of public health, irrigation and literacy in a number of countries by the late 1980s. It was thus a natural but crucial development for the agro-ecosystem base of IPM Projects in Southeast Asia, where FFS first evolved, to seek partnerships with adult educators so that smallholder farmers in their own communities could be supported and empowered in order to learn and co-produce strategies with which to manage the more complex situations arising in their local community agro-ecosystems.

The learning topics for the FFS should be defined with inputs from the community and group members. The FFS curriculum should reflect existing gaps in the community's knowledge and skills, and opportunities to improve. The content builds on local knowledge systems and creates opportunities to test and validate scientific concepts, addressing location and situation-specific learning needs in a local context.

**Knowledge generation is central in FFS and FFS Projects.** The FFS creates a space for active hands-on practical learning, following the crop/herd/enterprise through the critical development stages. Direct observations and active experimentation guide intensive discovery learning over a season. Theories and assumptions can be tested and analyzed to enhance skills and competences.

**The field or herd is the learning ground.** In an FFS, sometimes called a *school without walls*, the field setting and practical experimentation are central to the learning process. Each group designs and sets up a learning trial (household plot, herd, household livestock, fish pond or landscape depending on the specific focus of the FFS) that *allows for a comparison of practices or technologies on a locally appropriate topic*, often combining indigenous and expert knowledge. The experimentation in FFS allows farmers to learn from empirical observations and puts the emphasis on testing and validating new concepts and technologies under local ecological and socio-economic conditions. This builds critical thinking and allows local and science-based knowledge to merge.

**A process of observation, critical analysis, sharing and debate, conclusion/decision and application to enhance knowledge and decision-making skills.** The FFS process encourages learners to actively improve their competencies through observation, analysis and examination of the

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<sup>130</sup> Anderson, J. R., Feder, G. & Ganguly, S. 2006. The rise and fall of training and visit extension: an Asian mini-drama with an African epilogue. World Bank Policy Research Working Paper. 3928. Washington DC, The World Bank.

<sup>131</sup> Leeuwis, C. & van den Ban, A. 2004. Communication for rural innovation: rethinking agricultural extension. UK, Blackwell Science Ltd.

experiences and ideas of others through interaction. This enables learners to strengthen their skills and make informed decisions.

**Learning is a continuous process.** In FFS, learning follows the natural cycle of the study topic, for example, from “seed selection to harvesting”. This is normally referred to as “season-long” (or “cycle-long” in the case of non-crop enterprises such as livestock or fruit trees). This allows farmers to understand complex relations in agro-ecosystems over critical development stages. They learn in real time as problems occur, by organizing learning events and meetings at critical crop/enterprise/trust building development stages.

**Developing skills and competences.** In FFS the focus is on developing skills and competences rather than assimilating information regarding new technology options. The focus is on understanding the basic science behind various aspects of the agro-ecosystem so that farmers can carry out their own innovation processes, i.e. understand the “why” behind the “how” and the “what”.

**Systematic training process.** All FFSs follow the same systematic training process where the cornerstone is to observe and analyze field experimental activities. Every FFS session includes at least three activities: agro-ecosystem analysis (AESA), a “group dynamics activity” and a “topic of the day”. The group dynamics activity leads towards team building and organizing skills for the group itself. The “topic of the day” usually includes technical information to complement the “learning by doing” and “field experimentation” in an FFS. This is a farming related topic connecting to observations in field experiments, but could also be any other subject of concern to group members, such as nutrition, gender equality, micro-finance, price spikes, etc. If the facilitator lacks the specific expertise, external specialists or other community members can be invited to lead discussions. The entire FFS learning session is usually held for a half-day period.

**Facilitation of the learning process by competent facilitators.** Trained and competent FFS facilitators (usually government, NGO extension workers or community members) guide the learning process. They mentor and assist the participants to take responsibility for their own learning through the use of participatory appraisal tools, among others. In the discussions, the facilitator contributes and helps the group to reach a consensus on what actions need to be taken. One or two facilitators are assigned to an FFS group for the full duration of the FFS learning cycle and will be present at the scheduled FFS meetings. The facilitators are trained in a formal training of facilitators (ToF) course developed and run by experienced FFS master trainers before the start of an FFS. Researchers, subject matter specialists and external experts are occasionally invited to provide technical support to FFS groups as needed. Farmer facilitators emerge from FFS and are critical for scaling-up Projects locally.

**Building trust and strengthening groups.** Towards the end of a basic learning cycle the FFS participants will evaluate the activity, and define what follow-up activities are relevant. This is the basis for planning for continued action, in support of broader community development.

## REFERENCES AND FURTHER READING

[https://en.wikiedia.org/wiki/Farmer\\_Field\\_School](https://en.wikiedia.org/wiki/Farmer_Field_School)

<http://www.fao.org/agriculture/spm/Project/ffs-approach/en/>

<https://www.arec.umd.edu/extension/ume-arec-programs/farmer-field-school-topics>  
(University of Maryland FFS topic Fact Sheets, e.g. horticulture, crops, micro-watering, irrigation, food preservation, beekeeping, livestock, poultry, marketing)

<https://www.slideshare.net/yagneshsondarva/farmer-field-school>

Farmer Field School Guidance Document: planning for quality Projects (ISBN 978-92-5-109126-5)  
FAO, Rome, 2016

### **Annex 3: Technical Specifications for Agro-Meteorological Stations**

The Project intends supply, install and provide O&M training for 5 agro-meteorological stations equipped with 10 soil moisture measurement units per each station. One station with 10 moisture measurement units should be designed to cover at least 100 ha project lands.

Meteorological station:

- Should have independent power supply (e.g. equipped with solar panels or equivalent solutions);
- Should be equipped with the following sensors: temperature, relative humidity, rainfall, wind speed, radiation, leaf wetness, tree disease detector;
- Measuring interval: no longer than 5 minutes;
- Provision of internet connection;
- Temperature accuracy:  $\pm 0.5^{\circ}\text{C}$ ;
- Relative humidity accuracy: 3% (within range 25%-90%);
- Rain sensor accuracy: 5%;
- Global radiation sensor range: 0 - 2000 W/m<sup>2</sup>;
- Global radiation sensor accuracy:  $\pm 5\%$ ;
- Wind speed range: 0-40m/s;
- Contain remotely controllable, user friendly software for monitoring of data, analysis of conditions, forecasts, advisory on scheduling irrigation with required quantities.

Remotely installed 10 soil moisture monitoring units per each meteorological stations:

- Should have independent power supply (e.g. equipped with solar panels or equivalent solutions);
- Easily installed 60cm soil moisture measurement sensors;
- Irrigation rain gauge with 0.5mm resolution;
- Temperature sensor insert in the moisture sensor stick.

## Annex 4: Executive Summary of the Rapid End Market Assessments

### Fisheries

The total area of the lakes, water reservoirs and irrigation canals of Uzbekistan, with exception of the Aral Sea, is more than 800,000 ha, and the total area occupied by pond culture reached to more than 20,000 ha by 2017. Relatively good fish production was recorded before and immediately after independence by the state in 1991, when the total fish production was 24,300 tons and it dropped to about 5,000 tons in 1996. During 1994-2009, the fisheries sector of the country went through a gradual privatization and a number of the commercial fisheries farms were established.

Throughout the period from 2009 to 2016, additional 2000 private fisheries farms were established following the privatization policy implemented by the Government of Uzbekistan. More than 10,000 hectares of ponds were established and fish production grew on average by 30% annually. As a result, nearly 76,000 tonnes of fish were harvested in 2016, which is 16,000 tonnes more than in 2015. However, with a population of more than 32 million, the domestic market demands more fish and fish products to ensure diversified diets of the population. In 2016, the freshwater fish supply for food in the country is estimated at about 0.8 kg<sup>132</sup> per capita per year, according to Production, Export and Imports data analysis provided in this report. Since the freshwater fish consumption has almost doubled during the past three years due to the increased local production supported by the growing incomes and preferences of population, we can estimate that the demand for freshwater fish will continue to grow in the near future.

The average consumption of freshwater fish in the landlocked developing countries is about 2.97 kg/year per capita (FAOSTAT, 2009-2013) and this consumption rate could be used as a benchmark for Uzbekistan. According to the analysis, the income of population will continue to grow in the next few years and there are some market signals that the fisheries farms are tending to increase their production. However, the rapid growth in consumption of freshwater fish during the last few years may already saturate the growing demand. Therefore it is cautiously estimated that in the near future the consumption will grow by only 50%, resulting in about 1.2 kg of freshwater fish per capita per year. This can be translated in the current freshwater fish production in the country has to be increased by 50% produce additional 38,000 tonnes of fish compared to the current situation.

Further development of the fisheries sector by using traditional technologies of pond-based fish polyculture has limited potential for substantial increase in production volumes, and more importantly to meet increasing market demand for fish and fish products. Currently, all available land areas are already distributed to fishery farms; further their reallocation is limited by available land and water resources. It is recommended to introduce technologies with significantly higher productivity based on the principles of intensive aquaculture and integrated use of water resources. In such situation, one of the most promising approaches could be development of intensive culture-based fisheries (including restocking programmes) and cage-culture development.

Rural households have small land plots for subsistence. They usually have limited availability and access to land and water resources to establish earthen fishery ponds. Also, they normally have limited capital resources to invest in production assets and infrastructure that is utmost important to organise intensive aquaculture on limited land areas. With current rates of increasing fresh fish supply, it is expected that there will be a growing demand for fish fry and fingerlings from the side of mid- and larger-scale farmers. For small-scale households, therefore, it will be more feasible to organise intensive hatcheries and nurseries for fry and fingerling reproduction in their households. For

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<sup>132</sup> According to FAOSTAT, fresh fish supply for food in Uzbekistan was 0.4 kg per capita on average for 2009-2013 (no data available for 2014-2016 at FAOSTAT). Since the production of fresh fish in the country has double since 2013, it was cautiously estimated that the fresh fish supply for food in 2016 reached 0.8 kg per capita.

such purpose, interested households will have to develop their technical capacities, skills and knowledge on important aspects of fish hatchery and nursery technologies.

In order to intensify the fish production, it is suggested to start at least with a mid-size family farm with 1-2 hectares, with reliable access to land and water resources in order to run the profitable fishery farming with production capacity of at least 10-12 tonnes/year, as our marginal profit estimates demonstrated in the report. Such intensive fish farms will be able to compete well with larger-scale conventional pond fisheries due to their potential for all year round fish production. Regarding the competitiveness of mid-size intensive fish farms in domestic market, we estimate that they could be profitable as they would be able to operate all year round to supply fresh fish beyond the major harvesting pick seasons, when larger-scale fish farmers collect fish from earthen ponds. Due to such fact, it is expected that intensive fishery farmers would also be able to gain additional profits from market price premiums due to higher demand during other low production seasons.

Marginal profit estimates show that increasing cost of inputs (fingerlings, feeding, electricity, gas supply cost etc.), and market sale price fluctuations for fresh fish are very critical factors for the profitability of intensive fish farming. For example, if domestic market selling prices for catfish fall from UZS 13,000 to less than UZS 12,000 per kg, the farmers' profit margin, by end of the first operational year, could drop from 0.4% to negative -7.3%, and without labour opportunity cost (when family labour is utilized) it may drop from 14% to 5%, respectively. If farmers intend to utilize family labour, then the operational costs to produce one fish would be about UZS 8,600 (with hired labour it will reach UZS 10,100), giving them additional profit margin of 14% from the very first year of operation, which may rise up to 51% by the end of second year of production.

For farmers, who have better access to water reservoirs, it will be more feasible to organize an intensive cage-based fishery business with average productivity of at least 35-40 kg/m<sup>3</sup>. In such case, it will require about USD 35,000 of initial investment to produce 20 tonnes of fish per year. This would bring revenue of USD 30,000 each year in a 10-year span. In total, it will require about USD 150 million of investment to organize fisheries producing targeted 84,000 tonnes of fish by using cage technologies. For such investment, medium and large-scale fishery farms will be the major target categories, while it will not be affordable for smaller scale fishery dekhans. However, such smallholders will have a good market opportunity in organizing home-based hatcheries to supply such cage-based fisheries and intensive family-based mid-size fisheries with sufficient amount of fries and fingerlings. There is a demand for approximately 170 million fry per year at national scale. In order to produce such number, it is estimated that at least 2,000 smallholders (dekhans) can start hatchery businesses, if provided incentives in terms of trainings and advice for production technologies.

It is suggested to start with catfish and carp varieties to establish mass supply of fish products in domestic markets. Other fish species of higher value like Siberian sturgeon, salmon, trout etc. can be introduced and further supported in subsequent stages of sector development as market competitors would expand; and growing consumer preferences are expected with increasing per capita incomes.

## **Beekeeping**

Currently, there is an increasing domestic market demand in Uzbekistan for good quality honey. The production of natural honey in the country in 2016 reached 12,000 tons, about trifold more than it was produced five years earlier in 2011 (about 3,800 tons), and 6 times more than it was produced in the mid-2000s. The main honey producer areas in Uzbekistan are Bukhara, Fergana, Andijan, Djizzah, Kashkadarya, Namangan and Samarkand regions, and in 2016 these regions produced nearly 73% of the total country's production. By early 2017, smallholder dekhans supplied about 84%, while private farms and agricultural enterprises respectively produced only 12% and 4% of the total volume of natural honey supplied in the domestic market.

The beekeepers of Uzbekistan produced 372,202 bee-families in 2015, and 28% of them (102,409 pcs) were supplied from the Fergana valley - Andijan, Fergana and Namangan regions. The main producers of honey-bee families in the country were dehqan households (family farms), who supplied about three-quarter of the total national production of honey. There is also a growing regional export demand for packed bee-families, which have been imported by traditional honey producers and traders in Russian Federation and Kazakhstan since warmer climate in Uzbekistan allows earlier reproduction and family formation activities of the bees.

Regarding per-capita consumption, it reached 0.35 kg per capita in 2016. This can be also confirmed by increased honey production in Uzbekistan in 2014-2016. Consumption of honey is growing almost in all countries in the region. For example, in Turkey it reached 1.19 kg per capita (2013), in Europe 0.64 kg per capita (2013), in Russia - 0.44 kg per capita. In 2013, honey consumption in the Central Asian countries reached 0.23 kg per capita on average and, according to some estimates, it already approached 0.3 kg per capita in 2016. Based on the general trends of honey consumption in the region and taking into consideration the growing incomes of the population of Uzbekistan, it can be assumed that the consumption of honey in this country should reach about 0.5 kg per capita per year in the next 5-7 years. This level of per capita consumption corresponds to the level of consumption in the East European countries and in Russia.

That means that the beekeepers of Uzbekistan need to supply about 5,500 tons of additional honey to meet increasing domestic market demand and population growth. This will require an investment of USD 42 million, which would help to build about 377,000 new beehives, and to establish more than 7,300 new mid-size beekeepers, while ensuring employment (including women) and decent incomes for rural families. However, this investment should be accompanied by a honey quality improvement technical support program (training, breeding, laboratories, etc.) as the quality of honey is becoming a major marketing problem in the region.

Exporting natural honey from Uzbekistan may not have a strong competitive advantage compared to other regional market suppliers of natural honey from mountain regions such as the Kyrgyz Republic, Tajikistan or the Caucasus. Those regions mostly export honey from mountain herbs, which is highly valued by regional consumers. As export data shows, there is an observed higher demand tendency for live bee-families rather than for natural honey. For example, from 2012 to 2016, the total export revenues gained from the live honey bee families and natural honey were USD 8.8 million and USD 0.37 million, respectively. Since exporting packed honey bee families has been obviously more profitable both for apiculturists and for the national budget in general, it is suggested, to enhance the breeding quality of exported families of local honey bees so that there is a pedigree record book in place for each exported bee family, and certified export quality of the tested products. Therefore, it is recommended to target extended exports of certified packs of honey bee families, as demand for this market segment grows in the region.

Regarding the production challenges, honey bee families require daily observation and careful treatment during the winter seasons to maintain a good stock of bees for the next production season in spring. Cold winters negatively affect apiaries as the honey bees are sensitive towards diseases and cold. Disease preventive measures such as regular healthcare prophylactics by qualified veterinarians and attentive observations are important to maintain healthy families and decent productivity of honey bees. If not treated properly, there is a high risk that beehives freeze or get disease and honey bee families may easily be lost. There is a need to develop technical capacities and skills in apiculture for the newly established beekeepers.

At the institutional policy level, there is a lack of technical capacity and financial support to local research institutes to maintain reproduction of high-yield pedigree lines of honey bees. Local apiculture scientists and experts suggest that honey production may double in a very short period if supply of productive honey bees would be localized by establishing pedigree factories, nurseries and

modern labs for product standardization and certification. There is currently no valuation system to categorize productive stocks of local honey bees, and there are no pedigree records to systematize insemination and reproduction of honey bees with high productivity. Having such a valuation system in place may also facilitate standardization of the local honey bee pedigrees, and establish certification for different quality of produced natural honey and other honey products. Local consumers and regional honey importers may benefit from such quality valuation approach, while modern laboratories would help in testing honey quality and to ensure food safety before export certification. The estimated amount of technical assistance to establish improved breeding system for honey bees at national scale is about USD 400,000, including modern lab facilities for quality testing and honey certification.

## **Small ruminants**

The total number of sheep and goats population in Uzbekistan exceeded 18.5 million heads in 2016. The major share of these animals or more than 84% is kept by smallholder households. Local sheep breeds such as fat-tailed Jaidara (50% of the total sheep population) and Gissar (10%) sheep supply most of the mutton and fat in the domestic market, and they are bred in foothills and on highland ranges of the country. Karakul sheep (40%) is bred in desert and sandy areas of the country to supply meat and valuable pelts. Crossbred sheep based on native fat-tailed Jaidara sheep and Gissar have also been developed in different provinces of Uzbekistan to improve the production of certain outputs and to adapt to local conditions. Goats are reared all over the country. Goats supply cashmere, mohair, skins, milk, and meat. Three types of goats can be distinguished in the country: cashmere-producing goats, mohair-producing goats, and a variety of native goats.

Usually, rural households keep small flocks of up to 20 sheep and goats. When grazing pastures available, number of sheep and goats in the flock may reach 50-70 heads per household. Small ruminants are mostly kept as an easy-to-sell asset. One third of the flock is kept for family consumption. Sheep provide families with meat, fat and leather, and goats are kept for milk and wool. Furthermore, fat is processed into tallow. While most of the wool and skins are wasted or sold at low prices to traders, some minor portions are utilized by the households to produce winter clothing, carpets and ropes. Dung is used for heating and cooking. Goat milk and dairy products (cheese) are mostly consumed by households. Little number of households uses goat milk to produce dry curds and cream (suzma) for commercial purposes.

There are certain limiting factors for rearing sheep and goats in most regions of the country such as intense heat in summer period on piedmont areas, cold winter seasons on mountain areas, land shortage for forage production, and low carrying capacity of grazing lands, which cause insufficient supply of feeds not only in quality but also quantity.

Open market is the main transaction place for most commodities in the country, and formal retail shops have been scarcely developed particularly in rural areas. Farm markets in each district of the country are the main trading grounds for marketing of live animals. District markets usually have separate divisions for food products, clothing and livestock.

Most of the dekhani smallholders, dealing with marketing of live sheep, sell them liveweight to resellers at local farm markets, or at district slaughterhouses. Prices for live sheep and goat have a tendency to increase before Eid holiday, and in November due to the growing demand for animals and increasing supply of animal concentrates to the market after seasonal harvesting. Some rural households tend to purchase live animals prior these seasons for intensive 1-2 months fattening before Eid and New Year holidays. These fattened sheep are then slaughtered for home consumption or also marketed in search of cash in January-February of the following year.

The demand for sheep and goat wool/skin and its purchasing prices have been decreasing. The main buyers of the coarse wool are commercial enterprises of textile industry in Tashkent, Bukhara, or



exporters to Russia, China and other countries. The animal skins are purchased by traders and either processed by local leather clothing and footwear factories or exported mostly to Russian and Chinese markets.

Analyses of import and export data show that live sheep/goats and livestock commodity trade have nonlinear curve, with periods of actively increasing exports/imports and decreasing seasons in other years. Exports of animal skins/leather and wool from Uzbekistan have a tendency to increase with raising demand from neighboring Russian and Chinese markets. Import and export structure of wool commodities shows that added value textile goods from fine wool are mainly being imported from Turkey, China and India, while the major portion of exported wool is a non-combed coarse wool to Russia and China. Import of live animals is active mainly due to state-supported program on importing high quality breeds of goats and pedigree sheep from European Countries, whereas sheep and goat meat trade shows insignificant figures during the past half-decade.

Traditional meat consumers in Uzbekistan are more in favor of mutton and lamb rather than beef and poultry. This is particularly true for seasonal high demand in sheep meat consumption during traditional holidays and nation-wide festivities. It is expected that the domestic market demand for sheep meat will grow more rapidly in the near future due to increasing population and per-capita income growth in the country. Specifically, since 2010 the per-capita gross national income, or in other words purchasing power of the population, improved by 65%, from US\$ 4,280 to US\$ 6,640, while the market supply of carcass mutton and lamb meat rose more rapidly by 69%. It seems then that the income growth correlates with meat consumption, and further growth in income may stimulate the demand for more sheep meat and its consumption. It is worth to mention as well that the population of Uzbekistan increased by 10% over the past five years.

Currently, the total number of sheep and goats population in Uzbekistan exceeded 18.5 million heads. The major share of these animals, or more than 84%, is kept by smallholder households, and they are the major market suppliers of fresh mutton and goat meat. They produced more than 650,000 tons of liveweight sheep and goat meat for the total output value of nearly \$2 billion USD in 2016. The other two types of producers such as private livestock farmers and agriculture enterprises in combination produced only about 16% of the market share. Therefore, it is suggested to pay a particular attention to the smallholder livestock producers for potential project interventions rather than to the other two abovementioned farm types.

During the past 10 years, the per-capita annual consumption of beef on average increased by 4.7% (average per capita consumption rate is 27.4 kg/year), while for mutton and lamb it increased by 4.1% (average per capita consumption rate is 4.1 Kg/person). It therefore implies that increasing population and incomes stimulate market demand for both beef and mutton/lamb at almost the same pace, although farm market prices of the latter normally goes higher by at least 10%. Rough estimates on consumption of sheep and goat meat shows that it could reach at least 5.0 Kg/capita per annum in the next ten years. This means that either productivity should increase by around 10% or the number of sheep must rise by about 20%. Both scenarios require increased availability of animal feeding, improved infrastructure (slaughterhouses, cooling storehouses etc.) and effective livestock services to increase overall productivity.

Therefore, the main recommendation of the end-market value chain assessment is to improve the market infrastructure of the livestock sector, including animal marketing facilities, feed availability and distribution, artificial insemination, animal identification and efficient healthcare systems. It is not sufficient to create only service points for the physical factors of production; it is additionally and equally essential to train and deploy extension agents and livestock specialists that will teach and encourage rural households to adopt better production practices in the interest of increasing yields and incomes along the value chains. In short, the following six key elements were identified to further develop small ruminants' value chains:

- increasing of forage production and nutrition improvement;
- improving animal breeds;
- enhancing veterinary services, including both private and public;
- introducing animal products processing (including non-food) and marketing services, including animal aggregation facilities, live animal transport, organized slaughter houses, etc;
- capacity building for rural households on the best animal husbandry practices, and
- capacity development for the local livestock experts and extension workers, including both private and public.

A very important aspect is the proper management of pastures which provide a significant proportion of the feed consumed by small ruminants. More work is needed to develop different feed-production and rangeland utilization approaches by taking into account available natural resources, climate and seasonality of the local vegetation.

The earlier estimated 20% increase in sheep/goat population implies that there is a need for at least 0.8 million hectares of improved pastures to be available for growing animal feed and grazing. Considering that improvement of 1 hectare of natural pastures costs US\$ 100 on average, the total investment will be around US\$ 80 million. However, it should be noted that this investment would generate about US\$ 400 million worth of incremental production of sheep and goat meat in the next 10 years.

## **Sericulture**

The Uzbek Government considers silk as one of the strategic export commodities, and in addition to cotton, it is one of the sources of the public revenues in the agricultural sector of the country. The total volume of exports of raw silk amounts to approximately 1,200 tons and the total value to roughly US\$45 million. It is estimated that only 2-5% of the raw silk is processed domestically for weaving and producing silk fabric and products and the rest is exported as raw silk (95-98%). There is some potential to increase both the overall production of cocoons to produce raw silk and the share of the raw silk processed domestically. However, the sericulture industry of Uzbekistan is characterized by the old technologies and equipment along the value chain. Moreover, farmers are constrained by the lack of incentives to produce cocoons as the government imposes production quotas and sets the purchasing price of cocoons.

While the Ministry of Agriculture and Water Resources (MAWR) of Uzbekistan is responsible for the overall coordination of the sericulture industry and implementation of the government policies and decrees, the newly established Association of silk producers “UzbekIpkSanoat” (UIS) has an aim of reviving the sericulture industry of the country. Uzbek Scientific and Research Institute of Sericulture with the Silk breeding stations form a national research system in the sericulture sector. The Institute provides the super-elite and elite races of larvae to the silk breeding stations. The main function of the silk breeding stations is to further multiply the super-elite and elite races of larvae. The silk breeding stations produce about 18,000 boxes of larvae which are further distributed to the Silk larvae producing plants (Grenajnyi zavod) for industrial multiplication. All stations have been privatized and have the status of limited liability companies. However both the Institute and breeding stations’ equipment are obsolete and need upgrading.

The silk larvae producing plants are responsible for industrial multiplication of larvae obtained from the silk breeding stations and before handing over to the private farms/agro-firms. Countrywide, about 20 plants produce 230,000-250,000 boxes of larvae. This is roughly 50% of country’s total need of 450,000 larvae. The balance is imported from China (200,000-220,000 boxes). The locally produced boxes are supplied to farmers at around 70,000 UZS/box whereas Chinese boxes are sold at around 120,000 UZS/box due to their higher productivity and output of silk. There are 3 plants in Andijan oblast, 3 in Fergana and 2 in Namangan oblast. All plants operate at 20-50% of their capacity and are in the state of the disrepair.

There is a number private farms and agro-firms operating at production level of the sericulture sector of Uzbekistan. They receive boxes of larvae from the silk larvae producing plants and distribute to dehkan farms (household primary producers), for growing. Thus there are three categories of producers engaged in sericulture industry: dehkan farms, private farms and agricultural enterprises (e.g. agro-firms). Dehkan farms being the primary producers of the cocoons are not reported in statistical data and their outputs are reported under the private farms/agro-firms' outputs. This is because the private farms/agro-firms are the entry points for cocoon production and they in turn "sub-contract" dehkan farms to grow cocoons. Also they act as intermediaries between dehkan farms and processors. Private farms/agro-firms are imposed quotas and are forced to fulfil quotas. They have little commercial interest and deem it as a social obligation delivered to the state in return for loyalty to obtain/retain benefits (e.g. land, subsidies, etc.).

The sericulture processing industry is in deep state of the disrepair. Processors are represented by two types: reeling factories producing raw silk (thread) and weaving factories producing fabric and garments from raw silk. The reeling factories buy dried cocoons from AgroPillas (UIS's branches) and produce raw silk. The overall country's reeling capacity is estimated at around 1,600 tons/year. However, on average the country produces between 1,000-1,200 tons leaving an untapped potential for increasing production once enterprises are modernized and gain access to new technologies and equipment. Moreover, it is estimated that only about 2-5% of country's raw silk output is domestically processed and the bulk of it is exported abroad. There is again a high potential to enhance processing of raw silk domestically. The export countries of raw silk include: India, Iran, China, South Korea, the United Arab Emirates, Turkey, and Russia. The export price of raw silk reported by UzbekPakSanoat and some processors was at US\$ 38-40 per kg.

There are several private companies working in the sericulture sector of Uzbekistan. Some of them have a full cycle production from the production of cocoons till the final silk products. However, they don't have access to the larvae produced by the local larvae production plants. Therefore, they buy imported larvae from China. According to some estimates, the share of such private companies in the total national production of silk products is about 10%-12%. The fact that there are private companies successfully operating in the sericulture sector in spite of unfavourable conditions shows that the sector can develop without excessive government involvement.

The industry is heavily regulated by the government. In 2016, the average purchasing price was fixed at UZS 8,000/kg and in 2017 the average purchasing price is expected to rise to UZS 9,500/kg. Unless the price and profits rise, there will be little incentives for primary producers (dehkan farms) to be engaged in this business. The government needs to adopt a long-term strategy for liberalizing the industry and moving towards free market trade i.e. moving away from quotas and price fixing. This would ensure free market competition amongst various value chain actors and as a result would eventually stimulate producers to increase volume and quality of products in an attempt to capture the extra value for growing high quality cocoons.

It could be expected that the liberalization of the sericulture sector would result in a situation that the private companies would lead further development of the sector. New emerging private companies, including those that will emerge from the current semi-state entities working in the sericulture sector, will strengthen further sector development. It would be recommended to study how the liberalization of the sericulture sector can influence the public revenue generated by the sector and how it could be substituted by increased tax and duty revenues.

Since the breakup of the Soviet Union all value chain actors had very little access to the latest knowledge and training, new technologies and equipment. Therefore, their investments in upgrading the infrastructure, technologies and equipment should be supported by technical assistance, training and exposure to new technologies and know how.



## Appendix 5: Institutional aspects and implementation arrangements

### A. Organizational framework

1. **Implementing agency.** The Ministry of Agriculture and Water Resources (MAWR) has been identified as the implementing agency for the Agriculture Diversification and Modernization Project (ADMP). Day-to-day oversight of the ADMP's management will rest with a Project Management Unit (PMU) embedded in the Rural Restructuring Agency (RRA), a state entity within the MAWR.
2. **Authority.** The MAWM of the Government of Uzbekistan (GOU) performs the following main functions: (i) conducts monitoring over compliance with water legislation, cooperatives (*shirkat*), private, *dekhan* and public farming, considers infringement facts and issues appropriate decisions in a prescribed manner; (ii) participates in development and implementation of industry and regional agriculture and water management development programs in conjunction with the Ministries and Departments of the GOU, State Committees, bodies of state authority on places and bodies of state administration; (iii) together with other ministries, departments and state committees coordinates the development and implementation of measures directed to the development of diversified agricultural production and protection of rural producers rights; (iv) together with the MOE of the GOU, the State Committee of the Republic of Uzbekistan for Privatisation, Demonopolisation and Development of Competition and the MOF, carries out within the coordinated projects a review of agricultural market conditions in regions with the purpose of identifying practices of excessive pricing, abuse of a monopoly situation and unfair competition; (v) prevents (suppresses) actions of infringement of legislation on agriculture, water and water use; (vi) carries out a monitoring over the targeted use of budget funds of subordinated enterprises and organizations; conducts financial and economic analysis of their activity; provides methodical assistance to auditing commissions of cooperatives (*shirkats*); (vii) together with other agencies develops development strategy of village industrial and social infrastructure; and (viii) participates in coordination of economic and social development of construction, industrial, engineering enterprises, organizations, establishments and their associations subordinated to the MAWR.
3. The **Rural Restructuring Agency** is an executing arm of the MAWM with responsibility for the implementation of investment projects financed by multilateral organisation, notably the Asian Development Bank and the World Bank. The RRA is responsible as well for the implementation and operational support to the IFAD-financed HSP and DVCDP.

### Project Oversight

4. Overall management oversight of the Project will rest with an **Inter-agency Council (IC)**. The IC is an inter-governmental institutions agency for Cooperation with International Financial Institutions, Foreign Government Agencies and Donor Countries in Implementation of Large-scale and Strategically Important Investment Projects, and it shall provide guidance and direction to the MAWR and the RRA.
5. The ADMP Project Manager would act as Secretary to the IC. The IC would meet as required to: (i) review and approve the Project Implementation Manual (PIM), AWPBs including related procurement plans for works and services; (ii) review implementation progress and other monitoring and evaluation reports; and (iii) be advised of the results of the joint IFAD-MAWR project supervision missions, and advise and initiate action on matters arising relative to ensuring the efficient and effective implementation of the Project in line with the provisions, terms and conditions of the Project Financing Agreement.

## Project Management Unit

6. The ADMP will be executed under the operational responsibility of a PMU. The PMU will be embedded in the RRA and accountable to the General Director of the RRA, who in turn will be accountable to the Minister of the MAWM.

7. **PMU tasks/ responsibilities.** Whilst the operations of the PMU will be founded on a consistent results-based management framework/logframe—which will facilitate: effective execution of Project activities; the monitoring of progress made; and the systematization of Project implementation experiences—the principal PMU activities comprise: (i) overall operations planning, M&E and financial administration, including budgeting, procurement, accounting and disbursement. This includes the preparation of the AWPB, and the corresponding operational plans for each line of action; (ii) management of the Project as pertaining to loan administration and the actual field investments and activities; (iii) plan for socioeconomic and baseline studies (RIMS system), exercise the gender and legal advisory functions, and set up the systems and operational structures for Project learning and KM; (iv) submission to the Investment Selection Panel the proposed VCDPs; and the formulated agreements to be established with research institutes, industry associations and other Project agencies; (v) follow-up and supervise the Project's operations at field level, paying attention to the requirements of components and activities and the proper follow-up of pilot initiatives, including technical assistance to primary production/ processing and to PFIs; (vi) implementation support to the associated implementing partners; the organized farmer groups of beneficiaries; the PFIs; and other entities active in the participating value chains and ultimately to the Project's primary target groups of *dekhans*, small private farmers and related agribusiness entrepreneurs and market services providers; and (vii) provision of the required reports to government entities and IFAD according to the Project Financing Agreement, i.e., RIMS surveys, mid-term and final evaluations, etc.

8. **PMU staffing.** The PMU for the ADMP will be headed by a Project Manager and be composed (preliminarily) of: a Chief Accountant; a Procurement Officer; a Gender/Youth Officer; an Administrative Assistant/Translator; and a Driver. The ADMP will use HSP/DVCDP legal staff. In addition, the Project will count on the services of national and international specialists in various fields.

9. A Project Implementation Team (PIT) will be established in one of the regions of the Project area from PY1 (TBI by the Government, but more likely in Namangan). The PIT would comprise: Regional Coordinator (Value Chain and Business Specialist), a Rural Finance Officer, an Engineer and an M&E Officer. There will be Regional Coordinators recruited to coordinate Project activities in the remaining oblasts. The PIT will be responsible for day-to-day implementation in the field of all aspects of the Project, with the exception of financial administration and procurement, which will be managed entirely by the relevant personnel of the RRA/ADMP PMU at central level.

10. The PMU/PIT will coordinate the work of competitively selected private service providers and consultants and participating financial institutions (PFIs) who will interact with value chain actors on planning and financial matters. VCDPs will be prepared by these private service providers/consultants working with value chain LEs and other value chain stakeholders. The Project design team assessed a number of potential private service providers/consultants and confirmed that sufficient capacity exists in the private sector for VCDP and business plans preparation.

11. Terms of Reference for key Project staff are detailed in Appendix 5, Annex 1.

12. **Project start-up activities** will include: (i) finalisation of TORs for key staff including the PMU, PIT and the required national and international Technical Assistance; (ii) recruitment of the key staff and consultants; (iii) conducting a gender sensitive, livelihoods-oriented Baseline Survey plus making arrangements for subsequent repeater surveys and Participatory Impact Monitoring with particular attention on targeting, gender and socio-economic improvement issues; (iv) a call for expressions of interest in becoming PFIs and selection of PFIs; (v) formulation of an Annual Work Plan and Budget (AWPB) for the Project's first-year of activities; (vi) finalisation of a Procurement Plan for the first eighteen months; (vii) an initial deposit in the Project's Designated Account by IFAD of up to US\$ 2 million; (viii) establishment of the Project's PME&L system; (viii) finalisation of the Project

Implementation Manual (PIM) including manuals for each of the sub-components; and (ix) holding a Project start-up workshop, while initiating promotion of the Project at regional level.

13. **Project start-up workshop.** Among those invited to attend the workshop will be the representatives of key sectoral stakeholders and participants in the ADMP, including among others: male and female *dekhan* and private farmers, agri-firms, entrepreneurs and market services providers representative of the project's target group; candidate PFIs; business development services providers; the authorities of the universities/ R&D institutions that are expected to participate in the Project; relevant farmers, and their organizations (e.g., UzRiver Fisheries association), candidate Leading Entities (LEs) and business organisations; government authorities at central, provincial and district levels, including representatives from Women's Committee; representatives of key socio-economic research institutions (e.g. the State Committee of the Republic of Uzbekistan on Statistics and the Centre for Economic Research (CER)); representatives of local government and community-based organisations, including *mahallas*, reflecting the Project's intended target groups, in particular rural women's organisations (including Business Women's Association); representatives of research institutions (including SRI-PFL) and public laboratories for quarantine and SPS standards (including Uzglavgoskarantin); representatives of other projects concerned with rural poverty reduction and development; and representatives of development partners, e.g. the FAO, the World Bank, the UNDP, the ADB and GIZ; other stakeholders as relevant.

14. Key outputs from the workshop would include guidance on: (i) Project's component content and implementing modalities; (ii) refinement and finalisation of the PIM; (iii) refinement and finalisation of the Project's targeting criteria and M&E indicators; (iv) finalisation of an Annual Work Plan and Budget (AWPB) for ADMP's first-year activities; and (v) finalisation of an eighteen-month Procurement Plan. Outputs related to implementing modalities and associated results and impact would feed in to the design of the Project's Management Information System (MIS) and PME&L system.

## **B. Implementation principles and governance**

### **Project resource allocation**

15. The ADMP seeks to increase inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved natural resources Project support would be delivered in the context of a management approach that is targeted, demand-driven and participatory.

16. The ADMP will be executed through a demand-driven approach, rather than the planning and definition of annually fixed targets. Incentives to participate will be promoted by the Project, i.e. the public sector (the push factor) while seeking the initiative and direct involvement of the private companies qualifying for the role of a Leading Entity (the pull factor). To this effect, the Project explicitly incorporates the following actions:

- Facilitating 'smallholder producer-to-agribusiness formal arrangements for the production of raw material according to the buyer's specifications, adequate aggregation and cold chain management, mentoring through the Project to facilitate the adoption of the new business models, etc.;
- Facilitating the development of inclusive value chains (focus on smallholder producers, women-entrepreneurs and youth) and providing the advisory services required to formulate the VCDPs for access to the Project's financing products (rural guarantee fund and credit lines);
- Elaborating a Gender Action Plan (GAP) that stipulates gender mainstreaming of Project activities as well as setting gender-sensitive targets;
- Contributing to overall government's priorities and efforts to diversify and modernize the agriculture sector;
- Establishing and supporting, both: (i) the 'brokerage' function, through an efficient ADMP technical team (i.e., technical advisers, Regional Coordinators/ Value Chain Development, Rural Finance Officer, Irrigation Engineer, etc.); and (ii) a suitable M&E/KM system that will follow-up on the key outcome-output performance indicators.

## Governance

17. The Project's design incorporates various measures to assure good governance as indicated by overall operational accountability and transparency; financial management; procurement of goods and services; environmental governance; gender equality and mechanisms for complaints and remedies. These include: (i) the terms and conditions of SLAs; (ii) consistent stakeholder representation in the Project's planning, M&E/ KM and impact assessment cycle, affording mechanisms for complaints and remedies; (iii) fair participation of women beneficiaries in all activities and levels of the Project; (iv) social, environmental and climate change safeguards and guidelines detailed in the PIM; (v) application of guidelines and procedures for procurement consistent with the current IFAD Procurement Guidelines; (vi) close supervision and implementation support by IFAD, including risk-based financial management supervision and operational reviews; and (vii) provision for regular external audit.

## C. Organizational setting and arrangements for components implementation

18. The Project's implementation aims at achieving the following three outcomes, through their corresponding components: **Outcome 1. Enhanced capacity for sustainable and efficient performance of targeted stakeholder; Outcome 2. Productivity and efficiency along targeted smallholder-inclusive value chains increased; and Outcome 3. Improved farmland productivity resulting from modernized irrigation infrastructure.**

### Component 1. Inclusive Value Chains Development

19. Activities under **Sub-Component 1.1 Enabling Business Environment for Inclusive Value Chains** will be led by Regional Coordinators who will be supported by a team of qualified experts (2-3 international value chain advisors, 4-6 national business specialists).

20. **Value Chains Mapping** of the four sub-sectors (sericulture, fisheries, apiculture, and small ruminants), for which Rapid Market Assessments were completed during the design, will be conducted at the onset of the Project. The exercise will include the following main steps:

- Review the results of the above four Rapid Market Assessments, and prepare a list of all the identified enterprises. The enterprises are classified by region, sub-sector, and type of business (aggregators/traders (e.g. agri-firms), processors, storage operators, exporters, etc.);
- Organize meetings with regional *hakimiat* in each region to verify and, if necessary, modify the list; if necessary visit rayon *hakimiat* and/or any other local informants. Special care must be taken to identify large farmers who also take up other roles on the value chain (such as aggregating products through purchasing from neighbouring farmers);
- Assess each enterprise's existing and/or potential linkages with the Project's main target groups (*dekhan* farmers and small private farmers), and rank them by strength of the linkages;
- Organize a meeting in each region, inviting those enterprises that have satisfactory linkages (existing or potential), to inform them of the Project outline, opportunities and conditions for participation (such as having the legal status), and request them to send Expression of Interests to the PMU; and
- Finalise the list of interested enterprises.

21. The same team of experts will conduct **Rapid Market Assessments** for four additional sub-sectors. It is envisaged that the additional sub-sectors will include fruits, vegetables, poultry and rabbit in view of their suitability for smallholder producers and high income potential. The PMU, in consultation with the MAWR, will identify the suitable sub-sectors and propose to IFAD for its no objection. Once approved, the same **Value Chains Mapping for the additional sub-sectors** will be conducted.

22. The enterprises which expressed their interests to become Project partners as Leading Entities (LEs) will be assisted with the preparation of a Value Chain Development Plan (VCDP), also called 'Roadmap'. Each VCDP will be based on a format stipulated in the Project Implementation Manual



(PIM), which presents a business model and includes a chart that shows clear linkages with smallholder producers – their locations and an estimated number (a sample is annexed to Appendix 4). The VCDP will also include a section on proposals to improve the suppliers' technical knowledge and capacities in order to maximise the functioning of the value chain. It will also have sections on (i) detailed proposals to improve technical knowledge and capacity of the *dekhan* and small private farmer suppliers; (ii) priorities and interests for future business orientations; and (iii) interests in specialised advisory services for innovations, such as water and energy saving technologies.

23. Preparation of VCDP will be assisted by a team of experts (possibly the same people as for VC mapping and market assessments), who will provide LEs with guidance, facilitate their interactions with farmers, *mahallas*, industry associations, and other potential resource persons and institutions as appropriate.

24. Each VCDP will be assessed against predetermined criteria which will focus on competitiveness/soundness of business orientation and inclusiveness. These are defined as follows:

**Competitive:** meeting market demand and maintaining or growing market share

**Inclusive:** providing benefits to small-scale farmers, including women

25. The PMU will determine the total score for each VCDP on the basis of the above two parameters, each on the scale of 1-5. VCDPs which will have positive impacts on women will receive a bonus score. Final selection will be made by a panel of external persons (five to seven members), including those from the private sector, industry associations, and relevant projects with good track records such as USAID's Uzbekistan AgLinks project. Selected LEs will notify one of the Project PFI which will start processing the loan application and its appraisal (under Sub-component 2.2). Each LE will simultaneously start preparing a detailed plan for meetings, which they organize at their own cost, with the representatives of potential suppliers (*dekhan* and small private farmers) and relevant *mahalla* leaders in which the LE will present the VCDP, as well as consult and agree with the suppliers the terms of contracts and proposals for technical support (extension services, access to inputs, etc.). Such meetings are designed to establish open communications between the LE and suppliers, provide opportunities to the Project target groups to fully understand benefits from participating in the value chains, and reinforce inclusive nature of the value chains. Minutes of the consultative meetings together with a list of attendees will be provided to the PIT.

26. The Selection Panel will also provide recommendations whether LE's shall receive specialised, technical advisory services tailed to them (under Sub-component 1.2).

27. **Sub-Component 1.2 Capacity Development for Value Chain Stakeholders** comprises activities to strengthen the capacities of the following value chain stakeholders: **LEs, mahallas (communities), farmers, veterinary services, business and industry associations and research institutes, entities on harmonization of regulations and standards, MAWR MIS Department and plant quarantine laboratory**. The following sections outline how these activities will be implemented. TORs for all the resources to be engaged outside the PMU for Sub-component 1.2 are provided in Annex 1 to Appendix 5.

28. **Support to LEs.** The selected LEs will receive training on business management, technical matters and other topics, which are important for successful business operations. The business development training will particularly focus on innovations in business management, invite speakers who have hands-on experience and highlight good practices rather than theoretical underpinnings. Half- or one-day training workshops will be organized, each inviting 10-12 LE representatives.

29. The Project's support to strengthen the LEs' technical knowledge comprises seminars on technical aspects of marketing, and specialized advisory services. The seminars for market knowledge enhancement will invite experts (from public and private entities) on the relevant topics, such as SPS regulations and international quality control standards. Each seminar (one-day) will be attended by a group of about 30 LE representatives. For advisory services, the Project will engage

technical experts (both national and international) who will provide intensive and hands-on advice to the selected LEs for short periods of time. The Selection Panel will provide recommendations whether LE's shall receive specialised, technical advisory services tailed to them. Criteria for approving the LE's access to the advisory services would include: degree of public goods nature of the investment (such as contributions to climate change mitigation and adaptation, new jobs creation, etc.); and the cost for such advisory services.

30. The PMU, with the help from Regional Coordinators, will take the overall responsibility for coordinating and implementing the above three sets of capacity building activities. The tasks will include topic selection (on the basis of VCDPs), preparation of plans for workshops and seminars, identification of the speakers and trainers/consultants through communicating with the Chamber of Commerce and Industry, Business Women's Association and other business organizations and consultancies, as well as with the projects by WB, ADB, USAID, GiZ and other external agencies which have ongoing technical assistance activities related to similar topics.

31. **Support to mahallas.** *Mahallas* in the catchment areas of the LEs will receive support for their actions to organize meetings to raise awareness of the Project, coordinate with LEs, facilitate farmer training (including ensuring the participation of poorer farmers, women and youth) and participate in the monitoring activities. The Project will engage a competitively selected, qualified national consultant as Social Mobilizer, who will take the overall responsibility for planning and organizing meetings with *mahalla* representatives (a total of 120 meetings each with five representatives). S/he will also prepare communication materials, including the Project brochure and a note to guide the representatives on undertaking their actions at their own *mahallas*. The Social Mobilizer will also ensure that the residents of *mahallas* are well informed of the Project by paying visits and directly communicating with them.

32. **Support to farmers.** Project support for farmers in the target regions will be through demonstrations and FFSs. The PMU will engage consultancies (national) for planning and implementation of demonstrations. Several consultancies will be selected each focusing on the subject matter of the demonstrations. Each consultancy will identify lead farmers as trainers and hosts of demonstration plots, agree on the locations and setup of plots and make arrangements for necessary inputs, organize TOTs, and supervise the farmer training. Consultancy teams shall closely coordinate with the PMU, PIT, local *hakimiats* and Social Mobilizer in planning and conducting the demonstrations. Up to 320 demonstration plots are expected with provision for approximately 20 participants each, including women (at least 30% of the total). Participants will be local *dekhan* and small private with interests to participate in the value chains in the future and a potential to benefit from the demonstrations. Low-income farmers, unemployed youth and women-headed households should be included among the participants. Women should be at least 30% of the total participants.

33. Up to 90 FFSs will be organized in selected districts. Districts could be those where no LEs are present, in communities where farming enterprises other than what LEs focus on seem promising, or as special enterprises which appeal to youth or women entrepreneurs. The PMU will recruit one or more national FFS Management Specialists (up to 60 work-months over 5 years) to facilitate setting up and managing the FFSs. An experienced Uzbek institution<sup>133</sup> will be contracted to operate the FFSs. The selected institution for managing FFSs will follow the recognized FFS methodology and format including: (i) needs assessment; (ii) curriculum development during a three-day workshop headed by the national FFS Management Specialist and/or an international FFS consultant where subject matter specialists, leading farmers and LEs develop the curriculum and agree on the subjects and content of the curriculum; (iii) TOT training during a three-week workshop leading to certification of Master Trainers (selected from leading participants in the curriculum development); and (iv) training of farmers in the field via Master Trainers on selected farms/agri-businesses in groups of 20-25 persons each. Various extension materials will be prepared and distributed as needed (mainly videos). The MAWR, the RRA/PMU, local government and host farmer/institute will agree on where the equipment will be situated and who has responsibility for managing the equipment procured for

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<sup>133</sup> The Uzgipromeliiovodhoz Institute, MAWR, is suggested.

demonstrations. Likewise, agreement will be reached on who will be the owner of this equipment possibly through partial coverage of the cost (modalities to be determined in the PIM).

34. **Support to veterinary services.** The PMU will recruit international technical assistance (4 work-months in 2 trips) from a Food Animal Veterinarian for refresher training on delivery of field veterinary health and production medicine services. S/He will oversee establishing the herd health practices within *mahallas* and train competent Uzbek vets in extending this concept to other districts and *mahallas*. The Food Animal Veterinarian will provide short-course refresher education (one-half day) for approximately 120 local vets and zoo-technicians over 4 weeks (30 vets per week) over a 2-month training cycle. Four days per week, the Food Animal Vet and trainees will provide mobile vet services for herd health practice and production medicine activities in the field.

35. The PMU/RRA will have a Memorandum of Understanding with the State Veterinary Committee (SVC) for implementation of respective activities related to upgrading of Zoo-Veterinary Stations, Vet Mobile Clinics and Animal Identification.

36. Contracts for refurbishing and upgrading of three demonstration Zoo-Veterinary Stations and procurement of Vet Mobile vans as well as for setting a pilot Animal Identification system (database software development and running, procurement of ear tags) will be tendered by the PMU in close coordination with the SVC. Modern veterinary practice and livestock production equipment will be provided for each demonstration station and mobile clinic according to a list prepared by the Food Animal Vet.

37. The Project will be encouraged to pull all the international TA within this activity under one contract with the OIE, based on the successful experience of the IFAD-financed Livestock and Market Development Project in Kyrgyzstan with similar activities.

38. Study Tours (up to six for 5 vets/zoo-technicians each time) to several countries will be arranged by the PMU. Study tours could be hosted through a contact with an individual veterinarian or a professional veterinary association in each country.

39. **Support to business and industry associations, and research institutes.** The Project will enter a contract with BWA for its delivery of the services in support of female entrepreneurs and unemployed/underemployed youth in the Project area. The Project support to facilitate youth's access to credit will be provided by a national consultant. In order to ensure close collaboration and coordination with the CCI, the consultant will be physically located at the CCI while reporting to Project Manager in the PMU.

40. The PMU will provide funds for a research contract to the Scientific-Research Institute for Livestock, Poultry and Fishery (SRI LPF) to carry out a research study on animal production with improved feeding. International technical assistance will be provided for up to five months (3 separate missions) in order to provide refresher training on nutrient requirements of animals throughout their life cycle; ration formulation by hand and by specialty computer programme; feed-bunk management for intensively managed animals, and feeding management applicable for smallholders and *dekhan* farms. This technical assistance could be co-sponsored by the ongoing Korean Technical Assistance project on the effects on meat production by feeding improved rations to small ruminants. The consultant will assist the staff to devise a research protocol to answer the relevant milk and meat production and financial questions required by the Project. The consultant and institute staff will prepare a report on the seasonal availability and quality of various local crop by-product ingredients for compounding concentrate rations and determine the need, if any, for importing specific concentrate ingredients and will prepare concentrate mix and forage to begin the trials.

41. When industry or commodity associations identify value chain development constraints and request assistance to remove these constraints, the Project will meet these requests. The PMU will contract local experts to carry out a needs assessment. S/he will prepare a report on the constraint, assess its significance and recommend a plan of action to alleviate the constraint. S/he will draw up tender specifications for equipment and supplies and terms of reference for technical assistance. The

PMU, local government and/or industry/commodity association will agree on where the equipment will be situated and who has responsibility for managing and/or operating the equipment. Likewise, agreement will be reached on who will receive technical training if needed.

42. The Project will support the Scientific Pisciculture Institute and Uzbekbaliksanoat Association (fisheries association) for the development and implementation of applied research on modern technologies for small-scale fisheries operators. The Project will engage an international consultant who will provide a short input to guide the institute's staff for the preparation of research plans and dissemination.

43. **Support for quality and safety standards compliance.** The Project will strengthen the capacity of public and private sector to harmonize and develop standards. To do so it will establish a Group of Experts on harmonization of regulations and standards of quality of selected agricultural products, and it will provide technical assistance and training on introduction of regulations and standards. The Project Manager will help the MAWR with designing, establishing, and accrediting the public laboratory within the MAWR Centre for Certification and Standardisation. In addition, he/she will work with the Group of Experts and Technical Committees on harmonization of regulations and standards of quality of agricultural products/commodities and follow up on their activities; carry out the dissemination campaign; and select on a competitive basis qualified consultants for conducting training according to the preset modules.

44. **Support to Plant Quarantine Laboratory.** The PMU will commission a local engineering firm to design and supervise construction of a Regional Plant Quarantine Laboratory in the Project area. International technical assistance from an experienced plant quarantine specialist or agronomist (six months in three trips) will be recruited to: (i) work with the engineering firm to approve laboratory design, interior spatial plan and draw up international tenders for all equipment/furnishings/supplies; (ii) provide training in management of a regional plant quarantine station including use of all laboratory equipment; and (iii) undertake a follow-up refresher training mission.

45. **Support to MAWR Management Information System (MIS).** The PMU will contract a local IT management firm in close coordination with the related MAWR department to design the proposal for establishing such a MIS.

46. **Knowledge Management and Exchange.** The PMU will be responsible for planning and organizing study tours, select participants among the Project stakeholders, and solicit their reports. Particular attention will be paid to include representatives from regional *hakimiats* to enable their exposure to new knowledge, which in turn will strengthen their overall support for inclusive agriculture value chains development. Similarly, the PMU will identify relevant international events and identify participants. The PMU will contract service provider/s for preparation and publications of materials (mainly videos), particularly on topics related to inclusive value chains development, smallholders' access to credit and innovations. The PMU will consult with IFAD on the selection of topics and outlines.

## **Component 2. Inclusive Rural Finance**

47. Though the PMU will exercise the day-to-day oversight of the ADMP, it will not interfere with the lending activities of the external partners and Participating Financial Institutions (PFIs).

48. The PMU will recruit a Rural Finance Officer (based in the Regional office) to oversee the activities under Component 2.

49. The PMU should promote social performance ratings of PFIs, the collection and monitoring of relevant financial and outreach indicators, and the development of appropriate management information systems, so that performance information is used as a management tool.

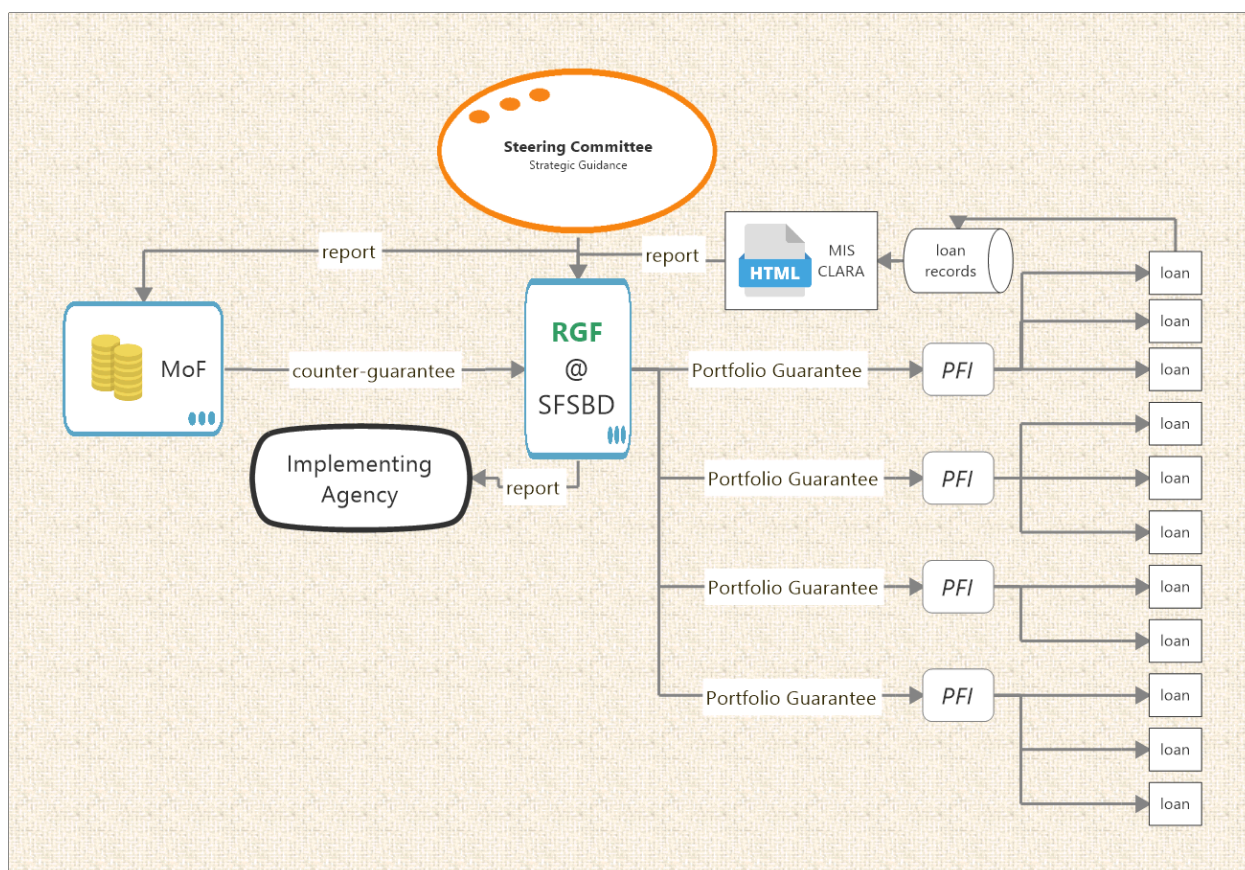
50. The PMU should also promote the participation in the Microfinance Information eXchange (MIX) Market, to promote transparency in the sector. PFIs can also use the MIX Market to compare their performance with that of their peers.

51. The PMU/RRA will do the necessary work to prepare Subsidiary Loan Agreements (SLA) with PFIs, with which Project beneficiaries will be linked to access credit.

52. **Sub-component 2.1. Rural Guarantee Facility (RGF)** Upon effectiveness, the Ministry of Finance (MOF) will have the right to withdraw the US\$ 9.9 million for establishment of RGF. The MOF will have the option to decide if the funds would be transferred to a special account at once, or when the SFSBD would be operational and ready to host RGF activities. Once the funds are transferred to the special account, the MOF will be responsible for investing them in secure financial instruments (e.g. government bonds) to yield interest.

53. Upon effectiveness, the RRA/PMU (implementing agency) will start the process for establishment of the RGF Steering Committee (SC) composed of representatives from the MOF, the SFSBD and the RRA. The SC will offer strategic guidance and oversight to RGF. The SC will assess (with the assistance of IFC) SFSBD's operational adequacy and readiness to manage RGF. Once RGF is established, it will operate as on the diagram below.

**Figure 4: RGF = Operation Flowchart.**



54. The MOF will be the custodian of the US\$ 9.9 million (the Funds). The MOF will offer a counter-guarantee to the SFSBD. The counter-guarantee will stipulate that the MOF is acting as a guarantor to the SFSBD for extending portfolio guarantees to selected PFIs for issuing credit for rural on or off-farm investments (with priority to the ADMP beneficiaries), up to a maximum of US\$ 30,000 (or equivalent), in the Fergana Valley. The counter-guarantee will also specify the terms under which the SFSBD can extend partial guarantees to selected PFIs, such as: a) PFIs will be required to leverage up to a maximum of 10 times (minimum 5 times) the amount of their portfolio guarantee in rural loans from own resources (not IFI credit lines); b) guarantees will be partial for up to 50 % of the loan amounts; c) a cap of 7% on accumulated losses per PFI will be imposed. In the adverse case that a PFI makes a claim to the SFSBD for an RGF guaranteed loan that has defaulted, the SFSBD would request the MOF for a relevant payment from the Funds. The MOF will have to pay at once, without

being involved in any way, in the claims appraisal procedure, which will be the sole responsibility of the SFSBD.

55. Once the RGF SC assesses and approves the readiness of the SFSBD to assume management of RGF (and IFAD issues a non-objection), a series of logistical issues pertinent to RGF's operation will have to be addressed: a) legal issues, b) governance issues, c) operational issues; d) outreach and communication activities to the financial sector; e) tendering procedures; f) selection of PFIs and relevant quotas; g) claims procedure; e) monitoring and reporting framework; e) audit; f) strategic guidance and oversight; and e) review of trigger conditions and release of RGF tranches.

56. The issuing of guarantees and counter-guarantees requires the involvement of the legal departments of the MOF and the SFSBD. The RGF SC will request the relevant departments to convene and finalize the documents that should be co-signed by the partnering institutions i.e. a document binding the MOF with the SFSBD and a document template, binding the SFSBD (RGF) to PFIs.

57. RGF will operate under the SFSBD's auspices. SFSBD's governance and management structure will therefore be the guardians of RGF's solid and transparent operation. SFSBD's governance is entrusted to the Council on Management – a body of reputable and high level political and business personalities of Uzbekistan. Its management structure is already described in the August 2017, Presidential Decree but not yet staffed (see Appendix 4 for more details). The RGF's SC will release the incorporation of RGF in SFSBD's operations, only once its governance and management structure are fully functional and tested.

58. Once RGF is institutionally and operationally ready, the SFSBD will have to initiate outreach events with the aim to communicate RGF's objectives and modus operandi to potential PFIs. The relevant events should be organized consecutively at least 3 times with 3-4 weeks time-interval and should lead to a structured dialogue with the aim to receive feedback on the optimal operation of RGF. The events should start with a presentation on: a) what does RGF has to offer (50% portfolio guarantee, renewable every two years, with 1% management fee, a cap of 7% and streamlined claim procedures); b) what is expected from the PFIs (commitment to the beneficiaries, agricultural risk management, leverage of at least 5 times the guaranteed amount in loans with no collateral, maximum principal up to US\$ 30,000 or equivalent, close monitoring and reporting on portfolio performance; c) what are the performance indicators (leverage, agro lending portfolio growth rate, NPL rate on this portfolio, recovery and loss rate, number and volume of loans issued under guarantee, number of beneficiaries); d) sanctions (revocation of guarantee if not used, revocation if NPL claims exceed 7%, revocation of guarantee and all claims, if PFI fails to initiate legal recovery proceedings and follow-up). The SFSBD may request relevant support from the ADMP's technical assistance facility. Strong awareness of the operation of RGF by the national financial regulatory and supervisory authorities and the PFIs is imperative for buy-in and good performance.

59. Once all legal issues have been attended, the outreach events completed, and RGF is ready to operate, the SFSBD will initiate a call<sup>134</sup>, inviting candidate PFIs to submit proposals for their participation in the RGF scheme. Proposals should include at least the following information pertaining to the lending institution or consortium: a) size of loan portfolio (total and rural); b) capital adequacy to leverage at least 5 times the requested amount of guarantee; c) operational capacity (branches in the Fergana valley, credit officers); d) experience in and methodology of agricultural and rural credit risk assessment and loan appraisal process; e) financial products pertinent to the target group (up to US\$ 30,000, no collateral requirements), f) pre and post-loan customer service to be offered to borrowers; g) interest rate to be offered reflecting the risk exposure; g) delinquency rates, NPL ratio, PAR, defaults and recovery rates; h) reporting system and publicity; i) declaration of minimum and maximum amounts of guarantee the candidate is willing to accept; j) declaration of good

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<sup>134</sup> The contents of the call for proposals are included in Annex 4. The SFSBD may need support from the ADMP technical assistance facility to finalize it.

standing; k) declaration of acceptance of the tendering process and RGF procedures (including specific mention on the fact they should at any point disclose to beneficiaries that ensuing loans are guaranteed).

60. The selection process will be entrusted to a Selection Panel (SP) consisting of at least 7 members (the number must be odd to avoid the possibility of a stalemate) from the MOF, the SFSBD and the MAWR/RRA. The SP will first assess proposals for eligibility and non-exclusion and will award portfolios to the selected PFIs. Exclusion criteria should include: a) non-compliance with the tendering process and RGF procedures; b) negative background, legal, accounting or factual checks (including high delinquency rate in agro-lending portfolio e.g. more than 7%). Eligibility criteria should include: a) size of rural portfolio (10% weight); b) operational capacity (20% weight); c) agricultural loan appraisal (25% weight); d) customer service (25% weight); e) offered interest rate (15% weight); f) pertinent products (5% weight).

61. The SP will use a standard evaluation voting system with a 4-grade scoring system (excellent, good, average, below average) and will compose an ordered list of the successful applicants. The amount of guarantees will then be distributed based on the maximum amount of guarantee requested (provided there is enough evidence in the relevant proposal proving adequate operational and financial capacity to support it) of the first applicants in the list, until the amount is exhausted. If the guaranteed amount is exhausted to less than 5 applicants the SP will redistribute proportionately.

62. Upon conclusion of the selection process, the SFSBD will issue RGF letters of portfolio guarantees to PFIs for the amount they were awarded. PFIs should start relevant activities immediately as the SFSBD will have the right to revoke guarantees that have not been used at all, for 6 months (the SFSBD will then redistribute them to subsequent applicants from the ordered list). The list will be updated every two years, thus allowing new applicants to enter, or existing PFIs to change their ranking (already proven performance will be weighted as high as 40%).

63. PFIs will be targeting eligible borrowers, i.e. rural smallholders engaging in rural farm and/or off-farm activities in the Fergana Valley, to offer credit without collateral, for working capital or investment for up to US\$ 30,000. As already mentioned, the priority will be given to Project beneficiaries, but gradually access would be open to all applicants from the Fergana Valley who cannot meet collateral requirements.

64. Each PFI will have to leverage loans for an amount of minimum 5 times its awarded portfolio guarantee, within 3 years of operation. Unused guarantees will be revoked and redistributed to other applicants, according to the most updated ordered list. The allocated total of US\$ 9.9 million will be tendered in tranches subject to good performance of RGF (full utilization of the guarantee, leverage higher than 5 times, loans targeted to intended beneficiaries and delinquencies lower than 7%). The first tranche (expected to take place one year after effectiveness) will offer US\$ 3 million worth of guarantees. The second tranche will be launched one year later and will offer US\$ 3 million. The ADMP's Mid-term Review will assess the RGF's performance and will determine a release schedule of subsequent tranches. In case RGF does not perform as required (full utilization of the guarantee, leverage higher than 5 times, loans targeted to intended beneficiaries and delinquencies lower than 7%) the remaining funds would be requisitioned and channelled to other Project activities. Before the launch of each tender procedure, the MOF (as the custodian) will have to issue a counter-guarantee to the SFSBD for an amount equal of the guarantee to be put in circulation.

65. RGF should refrain from excessive administrative requirements, as these often discourage lenders from using credit guarantees. Portfolio guarantees will be issued promptly by the SFSBD and PFIs will be responsible fully for the loan appraisal. After loan appraisal, when a PFI is ready to issue the loan, they will have to send their appraisal report to the SFSBD in electronic form. If the SFSBD would like to look deeper into the assessment, they will have to do so within two working days at the latest. The whole process should not exceed 3 working days. The SFSBD will be endowed with the agri/crop and profitability matrix developed by IFC (CLARA) to quickly review any loan's viability



(support from the ADMP's technical assistance facility). PFIs will have the right to create new loan capacity after maturity and repayment of initial loan following the same procedure described above.

66. PFIs will have to send regular reports (monthly) on portfolio performance to both the SFSBD and the MOF. Moreover, the SFSBD should have direct access on the performance of every particular loan under RGF. The SFSBD will in turn be responsible for reporting on the RGF performance to the RRA and the SC every two months. The SFSBD should develop an electronic, online monitoring system for RGF, with support from the ADMP technical assistance facility.

67. The claims appraisal mechanism and payoff procedures will also have to be clear and free of excessive administrative constraints. Trigger for calling guarantee claim will be 90 days after non-payment of a loan instalment to the PFI, with the PFI being required to have already started legal proceedings to recover losses (PFI will have to prove only initiation of legal action as the judicial system in Uzbekistan involves currently a lengthy process when filling lawsuits).

68. On 91st day after the first missed instalment and for a period of 30 working days thereafter, the PFI will have a possibility to call the SFSBD in. On receiving a claim, the SFSBD will have to assess its validity and ascertain that: a) the management fee has been paid for the relevant period; b) the claim is presented within the agreed timeframe; c) the PFI did not reschedule the loan without approval, d) the borrower was eligible for RGF, and e) the loan was disbursed within the portfolio guarantee. The SFSBD will determine the correct amount of the claim not including any penalty interest or legal fees incurred by PFI. The claim should only include unpaid interest for up to 90 days after the first missed instalment.

69. The SFSBD will have 15 working days to assess the validity of the claim and calculate the liability. On the 16<sup>th</sup> day after reception of the claim, it will have to issue the first instalment of the payout (50%). The PFI will be bound to continue its best efforts to recover the outstanding loan amount despite SFSBD payments and provide regular updates to the SFSBD. 60 days after the first payout instalment and on condition that legal proceedings for loan recovery are fully followed up the SFSBD will issue the second and final payout instalment (50%). Any recovery made by the PFI (before or after payout) will be treated *pari passu* (meaning it will be shared on a 50-50 basis in RGF's case).

70. Performance appraisal of RGF will be the responsibility of the SFSBD that will compile relevant reports. In addition to basic indicators such as the number and volume of guarantees and the number of beneficiaries, RGF will monitor growth rate, non-performing loan ratio, recovery and loss rate. The SFSBD will prepare two reports per year to be forwarded to the SC, the RRA and the MOF. All relevant authorities will supervise and regulate the effect of RGF to the economy.

71. Project Mid-term Review will assess performance of RGF and will revise modalities e.g.: a) is 50% guarantee coverage appropriate? b) is zero collateral a sustainable proposition? c) is US\$ 30,000 ceiling reasonable? d) is the 7% cap too constraining? e) can leverage be sustained between 5 and 10 times? f) what is the sustainability outlook of RGF (financial sustainability refers to the RGF's capacity to absorb losses and maintain an adequate equity base and should be assessed through the analysis of the leverage ratios - outstanding guarantees to equity - and the net loss ratio - payment of claims/outstanding guarantees)?

72. The RGF SC will be responsible for the strategic guidance, governance and oversight issues pertinent to RGF. It will convene twice a year and minutes will be kept. Additional meetings may be held in case of urgency with unanimous consent of the SC members. The RGF SC will also offer recommendations on the publicity and dissemination of the RGF's performance.

73. **Sub-component 2.2: Credit lines for agriculture diversification and modernization** and **Subcomponent 2.3: Special credit window for youth**. Given the realities of Uzbekistan – such as the absence of professional fund managers or institutions, and based on the experience of the two other IFAD's projects in the country, it is proposed that the management of the ADMP should be implemented by the Project Management Unit (PMU) established within the Rural Restructuring



Agency (RRA) under the Ministry of Agriculture and Water Resources (MAWR). The PMU headquarters will be located in Tashkent, with a regional Project Implementation Team (PIT) office established in the Project regions. While this set-up is not ideal, some of the risks of such arrangements will be mitigated by the fact that the same RRA is being used by both the World Bank and Asian Development Bank for implementation of their respective projects. IFAD has been using the RRA for implementation of its HSP and the DVCDP. Two persons will be involved in the implementation of Sub-components 2.2 and 2.3 – Project Manager and Regional Rural Finance Officer (see Annex I to Appendix 5 for draft Terms of Reference).

74. Given the situation in the financial sector, the credit lines will be made available to banks. The **selection procedure** of banks will be documented by the PMU in detail and comprise the following stages (each of them described in detail further):

- Announcement of the Project and collection of initial expression of interest on the part of banks;
- Bank screening against the minimum eligibility criteria;
- Bank due diligence;
- Submission of financial and operational proposals and decision on bank selection.

75. **Announcement of the Project and collection of initial expression of interest on the part of banks.** The PMU will prepare an announcement about the ADMP funding available to all interested and qualified banks. The announcement should be disseminated to all retail banks using the RRA's channels as well as other channels, such as the Central Bank of Uzbekistan, the SFSBD and others. The announcement should describe the Project, the competitive selection process and key eligibility criteria as described below. It should also state that banks meeting the eligibility criteria will be required to undergo a formal due diligence process, agree to adopt and co-fund a specialized automated agricultural loan analysis and monitoring system, and develop financial and operational proposals, to be submitted later in the selection process. Banks responding to the announcement should provide their written initial expression of interest.

76. **Bank screening against the minimum eligibility criteria.** In their expression of interest letters, banks should present the following information, confirmed by respective documents that will serve to assess their compliance with the following minimum eligibility criteria:

- Have a valid CBU license and be in full compliance with all banking laws and prudential regulations of the CBU.
- Be interested and committed to servicing the range of clients, who are the intended beneficiaries of the Project.
- Be committed to adopting and co-funding the automated agricultural loan analysis and monitoring system (the co-funding amount may range from US\$ 10,000 to US\$ 22,000).
- Have or be willing to open branches or mini-banks (outlets) in the Project regions or ability to ensure other ways of servicing the potential borrowers in the Project regions.
- Undergo an annual audit that is conducted in accordance with the International Standards of Auditing by an audit company acceptable to IFAD.
- Have the necessary staff, knowledge, physical and other resources to implement the credit facility under the Project.
- Do not have exposure to any one borrower as a percentage of its audited capital of more than 15 percent.
- Have aggregate exposure to insiders (defined as members of the Board of Directors and the Management Board of such bank, employees in management position and shareholders with voting rights in excess of 10 percent) of no more than 100 percent of audited capital.
- Have a positive net income for the current and two immediately preceding financial years, as reflected in the audited financial statements
- Have a CAMEL rating of minimum 3.0.

- Have acceptable asset quality (according to IFAD Decision Tools for Rural Finance, the indicator of portfolio at risk [PAR] over 30 days should be less than 5 percent) and quality management policies, procedures and skills.
- Have a Board of Directors, responsible for setting the overall bank policy and perform appropriate oversight of the bank's operations.
- Have a qualified and capable management team.
- Have a sound business plan and appropriate budgeting and budget control procedures.
- Have sound lending policies and procedures, including in respect of the entire credit cycle, problem loan management, write-offs of assets, credit approval authority, etc.
- Have satisfactory internal control and audit procedures, including accounting principles and procedures, and financial documents, internal controls and reporting, and operational controls, confirmed by external auditors.
- Not be exposed to undue interest rate risk, as confirmed by annual audited financial statements.
- Have an internal reporting and management information system capable of providing sufficient information necessary for managing the bank's operations, performance and risks.

77. The results of checking banks against the above criteria should be documented in detail. Only banks meeting all of the above eligibility criteria will be considered as candidates for the formal due diligence process; those not meeting the eligibility criteria may not be considered further.

78. **Bank due diligence.** A formal due diligence will be conducted in banks meeting all of the eligibility criteria and demonstrating their interest and commitment in implementing the Project. Professional consultant(s) with international expertise will be hired to conduct the due diligence process, to be paid by the Project. The due diligence process will review the quality of the banks' management, the historical and projected financial position of the banks, including earnings potential, operating efficiency, portfolio quality, capital adequacy, and liquidity with specific focus on the branches working in the Project area. The due diligence process will also verify whether the self-reported information submitted by the banks is accurate and confirm the eligibility of banks for the participation in the Project.

79. **Submission of financial and operational proposals and decision on bank selection.** Based on the results of the due diligence, qualifying banks will be requested to submit their financial and operational proposals for the final round of the selection process. At this stage, banks will be evaluated on the basis of the strength of their approach and the ability to offer the best implementation proposal and optimal conditions/product range for the borrowers, their commitment to reaching the target group (in particular, women and youth) etc.:

- In the **operational proposal**, banks should detail their operational procedures with a focus on: a) processing of loan application and assessment/review; b) loan approval process and the ceiling of each branch for loan approval; c) the recovery procedure as well as the write-off policy; d) outreach methodology; e) experience in agricultural lending projects, including respective product range; f) experience in promoting women's empowerment; g) the delivery mechanism (e.g. functioning branches in the Project districts); and f) **targeting mechanisms by which banks will ensure meeting the requirements for the average loan amounts** for respective subcomponents (US\$ 45,000 for Sub-component 2.2 and US\$ 10,000 for Sub-component 2.3).
- The **financial proposal** should detail the interest rate that the bank intends to charge to the Project target beneficiaries. Each bank will have to demonstrate that the interest rate charged is not contrary to the principles of long-term sustainability and do not endanger the profitability of the branches; at the same time, the interest rate should not be higher than what the bank charges for similar types of borrowers.

80. For the decision on the bank selection, the PMU should form a *Selection Committee* that should consist of a minimum three persons, including (but not limited to) representatives of the MAWR, the RRA, and the Project management. The decisions of the Selection Committee should be documented in detail and submitted to IFAD for approval prior to signing subsidiary loan agreements with selected banks.

81. The Selection Committee should assess the operational and financial proposals of the eligible banks (those that have successfully passed the due diligence) and award the funding based on this assessment. The Selection Committee should apply a ranking method to evaluate the proposals and award requested amounts based on the strength of the proposals. A ranking method based on the weights of assigned scores could be used (the Selection Committee may add other criteria to be used in ranking or modify the scores as appropriate, provided that the changes are documented and properly disclosed to IFAD) (see Table below). The Selection Committee should assign the banks ranking as 1st, 2nd, 3rd etc. in the final list based on the scores assigned. Following negotiations with those ranked, and if agreement is reached, a Subsidiary Loan Agreement (SLA) will be signed with each selected bank.

*Suggested bank evaluation criteria and scoring*

Criteria	Suggested weight
Interest rate proposed for the Project target beneficiaries <sup>135</sup>	40%
Financial performance indicators (based on conclusions of the due diligence exercise), including:	30%
PAR > 30 days <sup>136</sup>	10%
Return on assets (ROA) <sup>137</sup>	10%
Operational efficiency <sup>138</sup>	10%
Operational proposal	15%
Institutional capacity and performance (based on conclusions of the due diligence exercise)	15%
<b>Total</b>	<b>100%</b>

82. **Installation of the automated agricultural loan analysis and management system – CLARA (Cash-flow Linked Agri-Risk Assessment tool) by PFIs.** Prior to loan disbursement to end borrowers, the banks selected for the implementation of Sub-components 2.2 and 2.3 will be required to adopt a specialized web-based system, developed by IFC and tailored to the agricultural sector of Uzbekistan - CLARA. CLARA will allow for detailed loan analysis, including the assessment of agricultural business risks and the development of repayment schedules matched to the seasonality of agricultural businesses. It will also allow for the management and monitoring of loan performance, as well as the analysis and risk management of the whole agricultural portfolio, including concentration risks, sensitivity tests, comparison with similar businesses, and other types of analysis. Moreover, the system will allow for the dissemination of business development advice by PFIs to agricultural borrowers as it contains “technical charts” for various agricultural sub-sectors (checklists outlining key processes and stages in agricultural cycles with specific guidance on their implementation). The adoption of the system will be accompanied by training of banks’ staff and 1.5 – 2 years of technical assistance on the use of the system and maintenance provided by IFC experts.

83. Banks will get access to the CLARA system upon signing an agreement with IFC. IFC experts will conduct a preliminary assessment of each bank to determine the level of the bank’s readiness to adopt the system and the type and scope of the technical assistance required to launch and use the

<sup>135</sup> The lowest interest rate proposed will get the highest score.

<sup>136</sup> The lowest value of the PAR indicator will get the highest score.

<sup>137</sup> ROA must be positive. The highest value of the ROA indicator will get the highest score. ROA = Net income/Average assets

<sup>138</sup> The lowest value of the operational efficiency indicator will get the highest score. Operational efficiency = Operating expense/Average gross loan portfolio

system. The cost per installation may vary from US\$ 20,000 to US\$ 50,000 depending on the bank's level of preparedness, capacity and expertise in lending to agriculture. Banks will be required to co-fund at least 30 percent of the installation costs (between US\$ 7,000 and US\$ 17,000) and the Project will provide the remaining 70 percent. Upon launching the system, banks will be required to use it to analyze all loan applications and monitor and manage all loans issued within the Project.

84. The Investment Guidelines to be developed for the Component implementation will have to **reflect the adoption of the CLARA system** – as it will influence the PFIs' loan application forms, portfolio monitoring reports etc.

85. **Subsidiary Loan Agreements.** Based on the selection process, a Subsidiary Loan Agreement (SLA) with each selected bank will be signed. Each SLA should contain provisions reflecting the following terms and conditions.

- **Loan amount:** The SLA should clearly state the maximum amount of the credit line to be provided. This should be based on each bank's financial and operational proposal. In addition, after the provision of the full loan amount, the capital adequacy ratio of each bank may not exceed the CBU-established prudential standard.
- **Loan term:** Each SLA can be signed for a term of up to 10 years, with the ending date no later than the Project completion date.
- **Grace period:** A grace period for the repayment of loan principal can be provided to each bank for a term of up to 5 years. The duration of a grace period should be determined based on each bank's request per their financial and operational proposals. A grace period will be provided for the loan principal only; banks will be paying interest during this period.
- **Disbursement schedule:** The SLA should state the dates on which each bank can submit a request for funds withdrawal. Banks should be able to submit such requests based on the demand from clients and at least monthly. (Banks should not be required to submit requests monthly, but rather should have a right to do so based on their needs.)
- **Repayment schedule:** The repayment of principal and payment of interest should be made quarterly (e.g. within 5 business days after the end of each calendar quarter). The SLA with each bank should have a repayment schedule clearly stating the dates and types of payments (interest, principal), their amounts, taking into account the grace period for the loan principal. The repayment schedule should be updated after each new tranche disbursement. The repayment schedule of the banks should NOT depend on the repayment schedule of the end borrowers.
- **Principal amount to be repaid:** The amount of principal to be repaid each quarter should be determined by dividing the total outstanding loan balance by the number of remaining calendar quarters per the term of each SLA. This should be reflected in the loan repayment schedule, an amended version of which should be issued after the disbursement of each next loan tranche.
- **Payment of interest:** The amount of interest to be paid each quarter should be calculated based on an outstanding declining balance of the principal.
- **Interest rates:** The SLA should indicate the interest rate that each bank should pay on the loan. The interest rate should include all payments that banks should pay for the use of the loan.
- **Loan fees:** No loan fees in addition to the interest rate may be charged.
- **Collateral and guarantee:** Respective collateral/guarantee provisions should be included in the SLA; banks may provide their existing loan portfolio as a collateral provided that it meets reasonable quality requirements.<sup>139</sup>
- **Reporting requirements:** Banks should provide reports as required by the Project;

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<sup>139</sup> The loans under the Horticulture Support Project and Dairy Value Chain Development Project are guaranteed by the Government of Uzbekistan.

- **Bank transparency:** As recommended by IFAD's Rural Finance Policy, banks should report their information on their microcredit portfolio to the MIX either directly ([www.mixmarket.org](http://www.mixmarket.org)) or through the ECA regional representative, at least annually;
- **Client Protection Principles:** Banks should endorse the Client Protection Principles of the SMART Campaign ([www.smartcampaign.org](http://www.smartcampaign.org));
- **Sub-loan conditions:** The SLAs should state that the banks' loans to end borrowers should be provided under the following conditions:
  - i. **Geographical coverage:** The borrowers should live and/or work (at least have established linkages with suppliers from) in any of the Project regions;
  - ii. **Activities:** The borrowers should be engaged in entrepreneurial, agriculture-related productive activities and borrow for productive purposes per the ADMP objectives;
  - iii. **Purpose:** Loans extended by banks would be for working capital, investments or both;
  - iv. **Amount:** Loans extended by banks to end borrowers should depend on the following factors: (i) the type of activity to be funded and need expressed by a potential borrower, and (ii) repayment capacity of a borrower taking into account the cash flow of a borrower's business. Banks may provide a periodic loan mechanism (credit line) to reduce risk;
  - v. **Loan co-financing:** In addition to disbursing ADMP's funding, banks will co-fund 20 percent of the amount lent to end borrowers to other borrowers belonging to the target group of the ADMP out of the banks' own funds (parallel loans);
  - vi. **Term:** The terms of sub-loans can be up to 10 years and should depend on the type of borrower activity, the product range and lending policies of banks;
  - vii. **Repayment schedule:** The repayment schedule for loans to end borrowers should be, to the extent possible, linked to the borrowers' business and household cash flows and take into account specifics of agricultural business production cycles. Such repayment schedules will be generated with the help of the CLARA system. Banks can offer balloon repayment arrangements (i.e. one single instalment of principal at maturity) in case these respond to specifics of a borrower's agricultural business;
  - viii. **Grace period:** As necessary, banks should be able to offer a grace period of up to 3 years to end borrowers, depending on borrowers' agricultural production cycles and cash flows;
  - ix. **Interest rate:** Banks will apply interest rates per their internal interest rate policies for similar types of loans. Interest rates on loans to end borrowers funded from the project funds should be the same as those on loans with similar risk profiles within each bank.
  - x. **Borrower's contribution:** The borrower should contribute to the financing of his/her activity. Size of the contribution would be determined by each bank according to its own procedures but an average contribution of 5 to 20 percent depending on the loan size and intended purpose (working capital; investment) will be expected from each borrower;
  - xi. **Guarantee and collateral:** Banks would require collaterals and guarantees as per their internal policies and procedures. They should be free to choose either traditional collateral or borrower group guarantees (or both) depending on a loan risk profile.
  - xii. **Gender balance:** At least 30 percent of the loans will be extended to women or women-headed businesses (this applies both to the number and volume of loans).
  - xiii. **Provisions governing events of delinquency and default, SLA suspension and termination, SLA enforcement, dispute resolution, as well as any other provisions as required by the Law of Uzbekistan for loan agreements.**

86. **Fund disbursement.** According to the SLA, each bank should be able to submit a Funding Request at least monthly (based on bank's needs, it can be submitted with a lower frequency, but the PMU should be ready to process monthly requests). The Request should contain a list of borrowers to be funded, indicating a loan amount for each borrower, whether it is a group or individual loan, loan term, interest rate, type of activity to be financed, and project area. The PMU should have the Funding Request approved and issue funding within 5 business days upon receipt of a complete Request.

87. **Monitoring.** The PMU should conduct the following types of monitoring of the participating banks:

- Monitoring against the minimum eligibility criteria;
- Monitoring of compliance with key SLA provisions and Project targets;
- Borrower loan verification and compliance with SLA sub-loan provisions;
- Bank and client feedback and success stories.

88. **Monitoring against the minimum eligibility criteria:** At the PMU head office level, the bank monitoring should focus on making sure the selected banks continue to meet the minimum eligibility criteria. The Project Manager, together with the Procurement Officer, should collect and document, at least annually, the information on the minimum eligibility criteria for the selected banks. This information should be presented in way that allows evaluating any trends in the PFIs' performance (e.g. in a spreadsheet). In case any of the minimum eligibility criteria are no longer met by any of the participating banks, the Project Manager and the Procurement Officer should find out the reasons for this and notify the Selection Committee, the RRA management and procurement department, and IFAD. No further disbursement of funds could be made to banks not meeting the minimum eligibility criteria; the banks should be informed of this, as well as of the need to make efforts aimed at improving their performance to comply with the minimum eligibility criteria. In case the bank has not been meeting the minimum eligibility criteria for 2 subsequent annual intervals, the SLA with this bank should be cancelled and any outstanding Project funding collected.

89. **Monitoring of compliance with key SLA provisions and Project targets:** The Project Manager should monitor banks for their compliance with key SLA provisions, such as those on the sub-loan terms and conditions whether banks are reporting to the MIX on a regular basis (by checking their information at [www.mixmarket.org](http://www.mixmarket.org)), and whether they have endorsed the SMART Campaign Client Protection Principles (by checking the list of the Campaign endorsers at [www.smartcampaign.org](http://www.smartcampaign.org)). The Project Manager should document these monitoring activities, noting any instances of non-compliance, and work with banks to eliminate any such non-compliance. The Project Manager should also ensure that the funds disbursed by the PMU to the banks equals the amount disbursed by the banks to the borrowers and that the borrowers and the loan amounts are the same as presented in the disbursement request approved by the PMU. Furthermore the Project Manager should monitor the time it takes the banks to disburse the loans after the receipt of funds from PMU. In case of serious non-compliance (such as instances of fraud, fictitious loans and other criminal offences) the Project Manager should immediately notify the PMU management to investigate these cases. Importantly, the Project Manager should monitor whether the implementation progress of the project is on track and Project targets (such as those on gender and average loan amounts) are met.

90. **Borrower loan verification and compliance with SLA sub-loan provisions:** At the regional office level, the banks' monitoring should focus on making sure the participating banks actually provided loans to the borrowers, per their Funding Requests, and that these loans were provided in compliance with the sub-loan terms and conditions per SLAs. The Regional Rural Finance Officer should receive information on new disbursements from the Project Manager at least monthly, and check at least 10 percent of all new loans made by each bank (Box 1). The Regional Rural Finance Officer should check whether the loan agreement meets the requirements set forth for sub-loans in SLAs, and that the borrower actually received the loan under the conditions specified in the loan agreement, is engaged in a productive, agriculture-related activity, and is a resident of/or working in

the Project area; attention should be paid to checking borrower repayment schedules – to see whether they correspond to borrower businesses' productive cycles and/or household cash flows; and whether the borrower received any business development advice from the bank.

**Box 1. Example: Preparing a sample of borrowers for monitoring by the Regional Rural Finance Officer using a random sampling method \***

The number of new loans disbursed by Bank "A" is 50.

It is necessary to check 10 percent of these loans, i.e. 5.

Using the random number generator function in Excel (=RANDBETWEEN (1, 50)), the following five random numbers are generated: 8, 14, 21, 33, and 41.

In the list of clients, organized alphabetically, it is therefore necessary to check loan agreements of the clients under respective numbers.

\* Note: Other sampling methods may be used as appropriate (e.g. geographical, sectoral, gender etc.)

91. The Regional Rural Finance Officer should **not** check exact details of the loan use by the borrower (i.e. should not demand receipts proving how the money was spent or requiring to show purchased assets, etc.) unless there are serious reasons to believe that the loan is fictitious. The responsibility for the exact loan utilization and repayment by borrowers should be with the banks. The Regional Rural Finance Officer should be inspecting activities of banks (i.e. how banks treat borrowers), not borrowers themselves, and should be seen by borrowers as a friendly visitor. To the extent possible, he should visit borrowers independently, without the presence of the bank's staff, to be able to form an objective view.

92. The Regional Rural Finance Officer should maintain a checklist for monitoring banks' compliance with the sub-loan conditions per SLAs (see Annex 2 to Appendix 5 for a sample checklist). A summary report indicating the sampling method for loan agreements monitoring, the number of loan agreements monitored and the description of any instances of non-compliance identified should be prepared monthly and submitted to the Project Manager and the M&E Specialist. In case of serious non-compliance (such as instances of fraud, fictitious loans, client abuse and other criminal offences) the Regional Rural Finance Officer should immediately notify the Project management to investigate these cases.

93. **Bank and client feedback and success stories:** The Regional Rural Finance Officer should collect and document any formal or informal feedback coming from banks or their borrowers on their difficulties or challenges encountered during the Project implementation. These may include, for example, the lack of potential clients' awareness of the lending services available, difficulties in reaching clients in remote areas, or clients not happy with loan conditions or service.

94. The Regional Rural Finance Officer should also document any success stories of clients – such as innovative businesses, or clients improving their wellbeing, living conditions of business performance as a result of their productive activities funded with Project loans and any business advice received (either through banks or other Project activities). Attention should be paid to collecting stories of female clients (at least 30 percent of all stories) and youth. Similarly, he should document banks' success stories (e.g. expansion in new areas, development of new products or delivery channels, positive feedback from clients, better loan management due to CLARA installation, etc.). A report on banks' and clients' feedback and stories (accompanied by photographs as appropriate) should be submitted to the PMU at least quarterly.

**Component 3. Climate-resilient Rural Infrastructure (CRRi)**

95. The implementation of the CRRi component will be managed by the Project Management Unit (PMU) and its regional unit. The main tasks of the PMU will be: (i) conducting information campaign in the project area BAISs, AISs and WCAs; (ii) development of TORs for selection of Consultant; (iii) selection of Consultant; (iv) review and approval of the list of proposals provided by the Consultant; (v) overall management and monitoring of activities of the Consultant activities; (vi) procurement and

supervision of civil works and meteorological equipment; (vii) conducting regular M&E of CRR I activities based on the agreed set of indicators. The staff involved in CRR I component implementation will consist of an Engineer in the regional office of the Project Implementation Team (PIT). Coordination of the CRR I component activities will be the responsibility of the PIT Engineer.

96. A programmatic approach will be adopted where Project works will not be pre-identified before the start of the operation, but will be selected during the first year of the project implementation based on specified criteria and demand. The investment proposals selection criteria and scoring procedure for ranking of investment proposals are provided in Annex 3 to this Appendix.

97. All the proposals for infrastructure investment funding award will be approved by the Inter-agency Council (IC). The PMU will review the evaluation of applications conducted by the Consultant and provide recommendation to the IC for funding award.

98. The number of infrastructure investments for each year will depend on the size of each investment and budget allocation for particular year.

99. The main tasks of the PMU and its PIT will be:

- To publicize the availability of the competitive funding for tertiary system modernization support.
- To conduct procurement of Consultant and submit evaluation report and recommendations for contract award to IFAD for review and written no-objection.
- To review and approve the evaluation and ranking of proposed applications developed by the Consultant.
- To submit recommendations for funding awards with required supporting documents for IC and IFAD approval.
- To conduct procurement of civil works and submit evaluation reports to IFAD for review and written no-objection.
- To monitor and carry out second level of supervision of civil works implementation of investment projects by contractors.
- To conduct procurement of meteorological stations and supervise their installation and training for their operation and use.

100. Feasibility studies and selection of eligible proposals, development of engineering designs, state expertise review and approval of technical designs, environmental assessment and mitigation measures, daily supervision of the construction works as well as training of AISs and WCAs staff in systems operation, management and maintenance will be carried out by the Consultant selected on a competitive basis.

101. The first three-four months will start with selection of a consultant for vulnerability ranking of the priority area villages (under Component 1), publicizing of availability of infrastructure investment funds, development of application forms and receipt of applications. The Consultant will start reviewing the first batch of applications for funding from the infrastructure component after eight months of operation. It is expected that the first disbursement of the fund can be made only after some ten-twelve months after starting the programme implementation.

102. The budget requirements in the first year will be limited, as it will take at least eight months to execute the necessary preparation for infrastructure investments. The main indicative budget allocations will be in the second, third, fourth and fifth years. It is estimated that some 10% of total funds will be disbursed in the second year and 80% in the third, fourth and fifth years (about 30%, 40% and 20% respectively). This progression of financing is reflected in the detailed cost tables.

### **Summary of Selection Procedures**

103. **Information and Awareness Campaign.** The decision-making (selection) procedure to be followed for the award of competitive funding is guided by the principles of transparency, demand-driven allocation, market linkage, and cost sharing. Component implementation will be based on a set



of criteria that will ensure that the project resources reach the intended target groups and will start with an information and awareness campaigns. The information and awareness campaign will be undertaken by the PMU staff in their respective area of responsibilities through workshops organized within three months after the loan effectiveness, and will include at least BAISs and AISs authorities, WCAs chairmen and directors, small and medium-size farmers. The objective of these workshops will be to sensitize local authorities, BAISs and WCAs about the component, its objectives and eligibility criteria, and application and selection procedure. Provisions are made for these activities in the project operation budget. The specific steps each application will have to go through, in chronological order are described below.

104. **Application.** Request for funding from the CRR1 component will come to the Consultant from WCAs based on thorough consultation with farmers, BAISs and AISs. The application will be done in writing and should consist of required information and data for PMU decision making. Sample application forms are provided in Annex 3.

105. All applications will go through three steps selection process of: (i) pre-qualification; (ii) screening and ranking; and (iii) final selection. The three steps are described below.

#### **Pre-qualification**

106. The first step will consist of a desk review of the applications submitted to the Consultant. It will be carried out by PMU Consultant shortly after the set deadline for submission of applications for funding. The following applications will be refused without further consideration: (i) application is not provided in accordance with agreed format or missing key data; (ii) investment proposals are out of the Project priority area; (iii) the technical conditions of the main and secondary canals are of sound level or rehabilitated/modernised under the other donors funded projects; (iv) infrastructure other than tertiary irrigation/drainage systems. Following the desk review the Consultant will conduct field visits to verify the accuracy of the provided data, link with the entire Project target group and activities supported under Component 1. The field review will also assess the current condition of the proposed infrastructure and technical feasibility of the proposed investment.

#### **Screening and Ranking**

107. The prioritization of investment proposals passing the pre-qualification and field assessment by the Consultant will still require further data collection and analysis to be complied in investment-specific feasibility studies. The feasibility studies shall mandatory cover the key engineering and socioeconomic aspects that will enable generating the net benefit stream arising from the proposed investments and therefore comparing the viability of each investment proposal with a view at minimising the investment cost. For easier comparison a synthetic indicator such as the Internal Rate of Return (IRR) will be computed as to be described in the PIM (see Annex 3 for more details). A minimum cut-off level for the IRR will be applied at this step of the selection process. Proposals showing an IRR lower than 10% will be rejected.

108. All the remaining pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the following system. The highest score for each of the evaluation criteria would be given a score of 1.00. The scores for evaluation criteria of the other proposals will then be computed on a sliding scale as a proportion of the highest score.

109. Investments ranking for proposals will be based on the system consisting of calculation, for pre-qualified project proposals, of a synthetic indicator including: (i) financial viability and (ii) estimated investment cost. The respective weights given to the two factors would be 0.7 and 0.3 respectively (i.e. the financial viability and the required investment would be the main determinants for investment's prioritization). Details of ranking procedure are provided in Annex 3.

110. The main responsibility for carrying out ranking of investments will rest with the Consultant.

## Final Selection

111. The Consultant will submit the results of the selection process to the PMU for final review and proceeding with PSC approval and inclusion in the Annual Work Plan and Budget (AWPB).

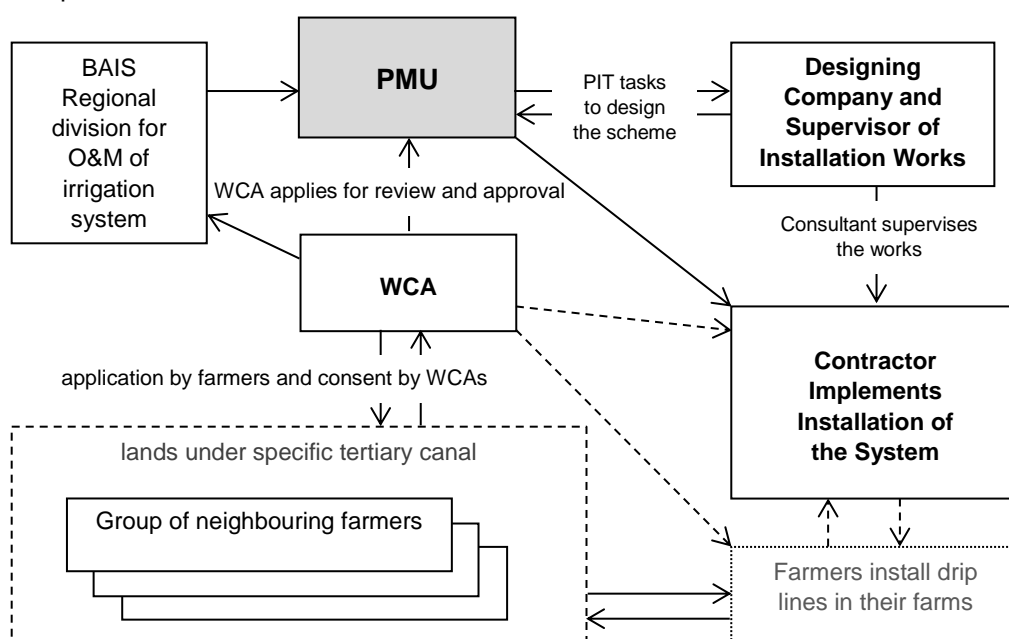
112. Approval by IFAD of the selection of proposals (sub-projects) will be required prior to the start of their implementation.

113. **Allocated Budget per Project.** No fixed pre-allocation of funds per WCA or project area regions/districts will be undertaken for infrastructure investments. The award of competitive funding will be on a voluntary, demand-driven basis for eligible investment proposals. Proposals with limited possibilities for future multiplier effect will not be considered as eligible under the CRR component investment.

114. **Environmental Guidelines.** No significant negative environmental impacts are expected from the infrastructure investment. The main foreseeable environmental concerns are the ones associated with the management and disposal of excavated materials and construction debris. However, all approved proposals/designs that are to be implemented through the CRR component funding will be required to meet requirements of the environmental legislation of Uzbekistan, to be verified by environmental assessment of each developed design. Submission of required documents for Environmental Assessment will be under the responsibility of Consultant and will be financed from the component budget.

115. Provisions are also made for *International Irrigation Engineer* (part time) to support the project on drip irrigation and other modern applications.

116. The below organigram provides the links between implementing entities within the Sub-component 3.1:



117. **Sub-Component 3.2: Increasing capacities of WCAs and BAIS divisions to operate modernized irrigation systems** is aimed in increasing capacities of operating organizations (WCAs and BAIS regional and district divisions) to undertake operation and maintenance of the newly modernized irrigation systems.

118. Two different sessions of trainings will be arranged: (i) operation and maintenance (O&M) of the reconstructed inter-farm irrigation systems; (ii) O&M of agro-meteorological stations.

119. **Trainings on O&M of reconstructed inter-farm irrigation systems** will be elaborated and conducted by the Consultant. Trainings will be arranged for the operational staff of WCAs and BAIS

regional and district divisions on the theoretical and practical aspects for O&M of the reconstructed inter-farm pressurized systems.

120. Trainings will be organized for WCAs and AISs staff responsible for operation and maintenance of the systems selected for modernization under the CRR component. Tentatively 10 trainings for WCAs and 6 for BAIS/AISs.

121. **Training on Agro-meteorological stations** will be arranged by the supplier of agro-meteorological stations for WCAs and BAIS/AISs staff: (i) to deliver skills for operating and maintaining the stations; (ii) on how to use information to schedule irrigations; (iii) on how to coordinate their work with *dekhan* and small private farmers; etc. Overall 4 sessions are planned for these trainings.

122. The following table provides detailed implementation arrangements and responsibilities:

Steps	Activities and process	Responsibilities
Information Campaign	Overall 365 WCAs of the Fergana Valley pass a half day sessions in the regional centers (Andijan, Fergana and Namangan) for: <ul style="list-style-type: none"> <li>Arranging information campaign among farmers to participate in the Project;</li> <li>General rules for preparing technical applications;</li> <li>Application Selection rules.</li> </ul>	PMU
Review of Applications from beneficiary farmers and approval	<ul style="list-style-type: none"> <li>WCAs, with technical support from BAIS district divisions, investigate inter-farm systems under their command area which potentially can be suitable for Project support;</li> <li>Agitate the Project ideas</li> </ul>	WCAs/BAIS
	<ul style="list-style-type: none"> <li>Group of neighbouring farmers who have intention to install drip irrigation system over their farms, apply to WCA to modernize the inter-farm irrigation system serving their lands to provide pressurized and filtered water</li> </ul>	<i>Dekhan</i> and small private farmers
	<ul style="list-style-type: none"> <li>With support from BAIS, WCAs analyze applications;</li> <li>In case application look technically feasible and reasonable, form application documents with information on beneficiary farmers, their cultivated lands, layout maps and submit to the PMU.</li> </ul>	WCAs/BAIS
	<ul style="list-style-type: none"> <li>Checking eligibility of applications (farm sizes, ownership, at least 80% coverage of applicants' lands under the inter-farm, etc.);</li> <li>Signing with beneficiary farmers preliminary agreements, which commits the farmers to install drip irrigation system in case of inclusion of the scheme in the Project;</li> <li>Tasking the Consultant to conduct feasibility studies, prepare preliminary design.</li> </ul>	PMU
	Review of applications, preparation of preliminary designs with economic analysis and submission to the PMU for approval.	Consultant
	Based on the preliminary designs with economic analysis, a decision is made on inclusion of the inter-farm system into the Project.	PMU/IC/IFAD no-objection
Development of Detailed Designs and bidding documents	<ul style="list-style-type: none"> <li>Upon approval selected schemes the Consultant will proceed with development of detailed engineering designs.</li> <li>Expertise approval and Environmental Assessment of designs.</li> </ul>	Consultant
Procurement of works	<ul style="list-style-type: none"> <li>Development of bidding documents.</li> <li>Bid advertisement and evaluation</li> </ul>	PMU
	Evaluation report approval by IFAD and contract signing	IFAD/PMU
Works implementation	<ul style="list-style-type: none"> <li>Selected contractor implements the works.</li> </ul>	Contractor
Supervision of civil works implementation	<ul style="list-style-type: none"> <li>Daily supervision of works as per the procedure and formats of the regulations of Uzbekistan.</li> </ul>	Consultant
Handover of completed works	<ul style="list-style-type: none"> <li>Upon satisfactory completion of works, the rehabilitated assets are handed over to BAIS district divisions. Form of certificate for works completion, guarantee period and handover as well as signatories of these certificated will be developed at start up when the PMU and the</li> </ul>	RRA/BAIS district division

<b>Steps</b>	<b>Activities and process</b>	<b>Responsibilities</b>
	Consultant will be on board.	
Operation and maintenance	<ul style="list-style-type: none"> <li>Operations and maintenance of the schemes through the BAIS district division and WCAs.</li> </ul>	BAIS/WCA
Installation of drip irrigation systems on the project farms	<ul style="list-style-type: none"> <li>Beneficiary <i>dekhan</i> and/or small private farmers install drip irrigation system over their lands;</li> <li>Beneficiary farmers who need funding, are eligible to for Project loans.</li> </ul>	<i>Dekhan</i> and small private farmers
Training of the WCA and BAIS staff	<ul style="list-style-type: none"> <li>The Consultant will arrange training sessions for WUAs' and BAIS staff to operate the modernized inter-farm systems.</li> </ul>	Consultant
Supply and installation of pilot agro-meteorological stations	<ul style="list-style-type: none"> <li>Selection of supplier of agro-meteorological stations;</li> <li>Supply of equipment;</li> <li>Selection of the sites for installation of the stations;</li> <li>Installation of the stations and handing over to the BIAS district divisions for operation.</li> </ul>	PMU, Supplier of agro-meteorological stations
Training of operation staff	<ul style="list-style-type: none"> <li>Supplier of ago-meteorological stations arranges relevant trainings.</li> </ul>	Supplier

## **Annex 1: Terms of Reference for key staff and consultants**

### **PROJECT MANAGER**

The Project Manager heading the ADMP PMU based in Tashkent has the overall responsibility for ensuring the effective management of the Project and achievement of Project objectives. She/he will have overall responsibility for the management of Project resources, including finances, personnel, vehicles, equipment and information and his/her major responsibilities are to:

- Provide direct supervision of all PMU and PIT staff and provide leadership to them for implementation of the Project;
- Ensure that the meetings of the Inter-agency Council are held as needed and facilitated;
- Hold regular monthly meetings with all key staff and implementing partners to discuss Project planning, implementation and progress;
- Ensure the timely preparation and collation of the annual work plans and the preparation of the annual budgets based on the work plans and ensure that these are submitted to IFAD and Government as stipulated in the Project Financing Agreement;
- Ensure the proper implementation of the work plans at the central and regional levels and ensure that staff are properly facilitated in the implementation of Project activities;
- Maintain focus on the less socio-economically advantaged, vulnerable and women and youth within the Project area and ensure that they are able to actively participate in Project decision-making and implementation. S/He will ensure that special strategies are developed to ensure their inclusion in Project activities. S/He will ensure that at least 30% of the Project beneficiaries are women;
- Ensure proper operation of the Designated Account and ensure the flow of funds as stipulated in the Project Financing Agreement and Project Implementation Manual. S/He will ensure the timely submission of the withdrawal applications to IFAD and ensure the timely audit of all Project accounts;
- Ensure that the procurements of all major items are made using the procedures specified in the Project Financing Agreement and the Project implementation Manual;
- Ensure that, as necessary and appropriate, MoUs, Partnership Agreements (PAs) with key Government agencies, regional agencies, NGOs and other specialised institutions are in place for ensuring the efficient implementation of Project activities;
- Ensure that a Management Information System (MIS) is established which provides data on progress, outputs and impact evaluation including responding to the information needs of the Project Results Framework and the IFAD Results and Impact Management System (RIMS). S/He will ensure that all key indicators are disaggregated by gender and youth;
- Ensure that the consolidated progress reports are prepared on a timely basis and submitted to all concerned agencies including IFAD. S/He will ensure that the special issues and constraints that affect the less socio-economically advantaged, vulnerable and women and youth are highlighted in Project reports;
- Ensure that contracts are executed with qualified agencies for the timely conducting of the baseline, mid-term and Final Impact surveys;
- Promote linkages with other projects and projects that would help to achieve Project objectives and maintain contacts with the different implementing agencies, donor projects, and central level institutions and ensure that they are well informed about the Project progress, best practices and areas where there are opportunities for linkages and sharing; and
- Ensure that IFAD supervision missions are facilitated and provided with logistic support.

- Being fully familiar with IFAD's Rural Finance Policy, IFAD's Decision Tools for Rural Finance and other relevant IFAD's policies and documents, and specific objectives and targets of the Inclusive Rural Finance Component of ADMP.
- Checking eligibility criteria for participating financial institutions (PFIs) and end-borrowers in accordance with project design and monitoring the adherence to these criteria.
- Contributing to the development of the Project Investment Guidelines.
- Disseminating information to PFIs about ADMP Inclusive Rural Finance Component, its targets and requirements.
- Checking PFIs' credit applications prepared in accordance with the project design and investment guidelines and submitting them for review of the PMU investment committee.
- Participating in the selection of PFIs for the component implementation, including the preparation of the necessary documents for the Selection Committee.
- Documenting PFI selection and the process of checking against eligibility criteria, as well as other relevant communication with PFIs.
- Managing PFIs' funding requests and disbursement projections, ensuring that they are aligned with the project implementation plan.
- Setting-up and maintaining databases for PFIs and end-borrowers in accordance with the project design.
- Managing portfolio reporting activities of PFIs per the project design on the basis of information received from the PFIs.
- Monitoring PFIs' compliance with provisions of the Subsidiary Loan Agreements.
- Monitoring PFIs' focus on project targeting and regular communication with PFIs to ensure the project targets are being met.
- Monitor PFIs' lending practices, including delinquency management practices, on the basis of information received from the Regional Rural Finance Officer.
- Supervising and coordinating the activities of the Regional Rural Finance Officer (including the development of workplans, schedule of monitoring visits etc.).
- Creating and maintaining summary reports on the basis of information received from the Regional Rural Finance Officer (such as reports on results of monitoring visits, relevant customer files, success stories etc.).
- Carrying out monitoring procedures on the basis of information received from the Regional Rural Finance Officer.
- Supervising periodic reports (at least semi-annually) on the progress of Component 2 implementation based on information received both by the Head Office and the Regional Office.

## **CHIEF ACCOUNTANT**

**Role and Location:** The Chief Accountant would be a member of the PMU of the ADMP. The ADMP PMU will be located in Tashkent as part of the Rural Restructuring Agency (RRA) **implementing** the ADMP under the auspices of the MAWR, which is the lead implementing agency for the ADMP.

**Responsible to:** The Chief Accountant will be directly responsible to the ADMP Project Manager.

**Job Description:** During the start-up phase of the ADMP the Chief Accountant will take lead responsibility for supporting the ADMP Project Manager in developing the ADMP's Financial Management Manual and associated procedures.

The Chief Accountant's daily duties and responsibilities will include:

- Keeping the books of accounts;
- Accounting and postings;
- Maintaining all ADMP-related bank accounts;
- Preparing financial statements as required;
- Assisting yearly audits of the ADMP;
- Monitoring all ADMP investments;
- Supporting the Project Manager in developing, operating and up-dating the ADMP's Management Information System; and
- Assisting in the preparation of the following, as related to financial management:
  - Annual financial reports;
  - ADMP Annual Work Plans and Budgets (AWPBs); and
  - Assistance with other matters related to financial management inputs.

## **Qualifications and Experience**

- The Chief Accountant should have a degree in Accounting, Finance, Economics, or Business Administration.
- A postgraduate CPA certificate would be an added advantage.
- The candidate should have at least 5 years practical experience with audit/advisory firms, financial institutions, private firms, or in similar relevant positions.

## **PROCUREMENT OFFICER**

**Responsible to:** Project Manager

### **Job Description**

Under the direct supervision of the Project Manager, the Procurement Officer would be responsible for procurement of goods, works and services in the framework of the ADMP. Within this overall role, the following tasks would be the specific responsibility of the PMU Procurement Officer.

- Prepare the annual Procurement Plans in accordance with the Annual Work Plans and Budgets;
- Draft the public announcement for each tender;
- Prepare Bidding Documents for each contract in accordance with the approved Standard Bidding Documents;
- Coordinate bid opening, evaluation and preparation of required documentation such as minutes of bid opening ceremony, written proposals and recommendations for contract award;
- Participate in Bid Opening and Evaluation Committee meetings and prepare the minutes;
- Prepare and submit bid evaluation reports and recommendations for contract award to the Tender Committee for review and approval.
- Prepare and submit to IFAD all required information for prior review and no-objection for contracts award as per the Project Financing Agreement requirements.
- After agreement with IFAD for contract award initiate the contract signing procedure;
- Coordinate all procurement procedures within the RRA regarding the ADMP implementation; and

### **Qualifications and Experience**

- A higher degree or an equivalent qualification in Law or equivalent with sound knowledge of the procurement procedures applicable under the legislation of the Republic of Uzbekistan and international donors' funded projects.
- A minimum of five years working experience, of which two with projects for financial services, and proven ability to work in a multi-disciplinary team.
- Familiarity with relevant legislation and procedures of the Republic of Uzbekistan.
- Fluent English, both spoken and written.
- Computer literate.
- The selected candidate will have a pragmatic, creative and energetic approach to problem solving and decision-making and the capacity to operate effectively with suppliers.



## **GENDER AND YOUTH SPECIALIST (Female)**

**Responsible to:** Project Manager

### **Responsibilities and tasks:**

- Provide advice and support to Project Manager and other members of ADMP management team and field officers in effective gender mainstreaming in Project activities;
- Finalize the Project's Gender Action Plan (GAP) by ensuring that the gender mainstreaming strategy and mechanisms outlined in the Project design is duly executed during the implementation, train PMU staff and Project stakeholders to familiarise them with the GAP;
- Work in close collaboration with implementing partners and stakeholders to develop yearly activities of GAP;
- Facilitate in implementation of the GAP and regularly monitor progress and identify needs and gaps;
- In consultation with Project Manager, Regional Coordinators and Rural Finance Officer, integrate gender-responsive budgeting into AWPB preparation process, reflecting the requirements to implement GAP;
- Support and facilitate the conduct of gender awareness training for Project staff, PFIs and SPs;
- Together with the Project M&E officer, establish a gender-sensitive M&E system and ensure that all Project data are analyzed from a gender perspective;
- Together with the Project M&E officer, regularly review the Project indicators to ensure effective integration of gender-related outcomes within the Project's performance measurement framework;
- Ensure that all progress report and evaluation documents report on sex-disaggregated data and include separate sections on gender outcomes;
- Identify opportunities of linkages with other gender training or women/social inclusion projects implemented by national, international and inter-governmental;
- Monitor that quotas are respected and check on a regular basis that there is no adverse impact on target groups as a result of Project implementation;
- Participate in the development of detailed TORs and tender documents for the national and local service providers for various Project components to ensure that the target groups, particularly women, will be able to participate effectively and profitably in all components and meet the Project's targets;
- Monitor the service delivery or SPs and PFIs and ensure that they meet the gender mainstreaming requirements outlined by the Project design;
- Coordinate with the Women Committee for policy dialogue and knowledge exchange;
- Assist the Regional Rural Finance Officer with planning, implementation and monitoring of the Youth Window; and
- Guide and supervise the Youth Business Coordinator (consultant) for planning, implementation and monitoring of training for the youth

### **Qualifications and experience:**

- At least 3 years of experience in working on women and youth issues and gender mainstreaming in development projects;
- Master's Degree in Social Sciences, Rural Development or related discipline;
- Experience in projects integrating gender consideration across components/activities and M&E required;
- Highly motivated and committed to poverty alleviation and gender equality.
- Good spoken and written Uzbek, Russian and English

## **PROJECT IMPLEMENTATION TEAM (PIT): REGIONAL COORDINATOR**

**Location:** ADMP PIT Office (Andijan, Fergana and Namangan)

**Reporting to:** Project Manager

### **Duties and Responsibilities:**

- Coordinate the mapping of all key value chain stakeholders critical to the successful implementation of the Project;
- Initiate consultations with identified value chain stakeholders to develop and agree on Value Chain Development Plans;
- Guide implementation partners and technical service providers on the identification, planning, implementation, monitoring and evaluation of value chain support activities, including the promotion of entrepreneurial skills in farmers' organizations;
- Facilitate linkages and contacts between the supported value chains' stakeholders including input suppliers and service providers, processors, middlemen and farmers;
- Coordinate the formulation and development of value chain financing mechanisms for improving the accessibility of financial services and knowledge to farmers and other value chain stakeholders;
- Guide the preparation and implementation of the various value chain related studies;
- Monitor the development of innovative business models and, in collaboration with the Monitoring and Evaluation Officer ensure related knowledge management, including the identification of best practices;
- Coordinate the work with WCAs on collection of the applications from beneficiary farmers;
- Coordination of trainings for the WCAs staff in agitation campaigns among farmers;
- Conduct meetings with applicant farmers and support in preparation of application;
- Monitoring issues considering gender, youth and other data required by the Project;
- Ensure adequate synergies between Project components in collaboration with the respective staff;
- Contribute to the preparation of project Annual Work Plans and Budgets (AWPBs) and progress reports; and
- Undertake any other duties assigned by the Project Manager.

### **Qualifications:**

- Master's degree in Agricultural Economics, Agribusiness, Agriculture, Economics, Rural Development or a related discipline from a recognized university;
- At least 8 years working experience in a similar field, 3 of which should be in senior management position;
- Experience in the private sector will be considered a plus.
- Demonstrated practical experience in facilitating value chain development at field level value chain analysis and in building capacity of value chain actors. Practical experience in value chains development will be an added advantage.
- Knowledge of technologies and best practices in value chain development, business development, and rural livelihoods;
- Strong computer and communications skills (oral, written, presentation); and
- Strong coordination, leadership and interpersonal skills.
- A good knowledge of Uzbek and English could be an added advantage.

## **PROJECT IMPLEMENTATION TEAM (PIT): REGIONAL RURAL FINANCE OFFICER**

**Location:** ADMP PIT Office (Andijan, Fergana and Namangan)

**Reporting to:** Project Manager and Regional Coordinator

The Rural Restructuring Agency (RRA) is requesting the services of a Regional Rural Finance Officer to co-operate with, and monitor activities of participating financial institutions (PFIs) in implementing the activities of the Inclusive Rural Finance Component of the IFAD-financed Agriculture Diversification and Modernization Project (ADMP), providing refinancing funds to commercial banks for on-lending to agricultural purposes in the regions of Andijan, Fergana and Namangan. The overall duties of the Regional Rural Finance Office will be to assist the ADMP Project Manager in all aspects of the Inclusive Rural Finance Component implementation.

The suitable candidate will have the following background and experience:

### **Duties and responsibilities:**

- Being fully familiar with IFAD's Rural Finance Policy, IFAD's Decision Tools for Rural Finance and other relevant IFAD's policies and documents, ADMP Project documents, and specific objectives and targets of the Inclusive Rural Finance Component of ADMP.
- Assisting Project Manager in assessing loan applications, checking the applications to ensure they are prepared in line with the project design.
- Together with Project Manager, developing workplans and schedules of monitoring visits to PFIs and end borrowers.
- Monitoring borrower loan verification and compliance with SLA sub-loan provisions according to the project design.
- Monitoring and collecting banks' and clients' feedback and success stories according to the project design.
- Working with regional offices of PFIs to assist in adopting and using the automated agricultural loan analysis and management system.
- Supporting Project Manager in monitoring PFIs' compliance with provisions of the Subsidiary Loan Agreements.
- Supporting Project Manager in monitoring PFIs' focus on project targeting and regular communication with PFIs to ensure the project targets are being met.
- Monitoring PFIs' lending practices on the regional level, including delinquency management practices.
- Disseminating information about the ADMP to relevant target groups and interested parties.
- Documenting all activities – maintaining files with workplans, schedules, results of monitoring visits to PFIs and end borrowers, photographs, client files, communication with PFIs etc.
- Preparing periodic reports (at least semi-annually) on the status of the component implementation and the work performed and submitting them to the Project Manager and Regional Coordinator.

### **Qualifications:**

- Diploma in Economics, Banking or Finance
- Minimum 5 years working experience in the financial sector;
- Minimum 3 years practical working experience with economics and financial analysis;
- Computer literacy and proficiency (word processing, spread sheets and data bases);
- Strong verbal and written communication skills;
- Ability to work efficiently under pressure and to meet deadlines; and
- Well-organised and well oriented to details.

## **PROVINCIAL IMPLEMENTATION TEAM (PIT): IRRIGATION ENGINEER (National)**

**Location:** ADMP PIT Office (Andijan, Fergana and Namangan)

**Reporting to:** Project Manager and Regional Coordinator

Irrigation Engineer will be appointed by the Project and will be reporting to the PMU Manager. S/he's role will be to coordinate all activities and play the role of focal point for irrigation and technical issues under Component 3 (Climate-resilient Rural Infrastructure). S/he's will be responsible for oversight of all consulting services and work contracts implemented under the Component 3.

The Irrigation Engineer will be responsible for overall achievement of Project goals under the Component 3 in relation to: (i) selection of project schemes; (ii) conducting of feasibility studies, preliminary and detailed designs; (iii) construction and supervision works within the project; (iv) training of the operation staff for proper operation of the reconstructed schemes.

This is a full-time position for the PMU Regional Office.

### **Duties and Responsibilities:**

- Preparation of work program, oversight of implementation and periodic reporting to RRA management;
- Oversight activities of the Consultant including review of reports and other deliverables: feasibility studies, preliminary and detailed designs, supervision of works;
- Review applications for reconstruction of inter-farm systems to be included in the project;
- Participation in drafting of technical sections for procurement of consultants and contractor;
- Support and participation in evaluation panels;
- Coordinate the work of Regional Coordinators;
- Coordinate trainings for the WCA and
- Based on the information delivered by Regional Coordinators prepare summary maps, aggregated their Prepare project maps with location of
- Coordinate the work with other components of the Project;
- Monitoring of Component 3 activities, results, outputs and outcomes;
- Preparation of materials and presentation of the Component 3;
- Undertake other duties assigned by RRA management.

### **Qualifications:**

- Master's degree in Irrigation, Hydro-technical, Agriculture or related engineering disciplines;
- At least 7 years working experience (from which at least 3 years in international projects) in irrigation development/rehabilitation and/or agriculture projects;
- Good technical knowledge of irrigation systems operation;
- Experience within irrigation institutional projects will be considered a plus;
- Strong computer skills including knowledge of communication, reporting and mapping software;
- Strong coordination, leadership and interpersonal skills;
- Fluent knowledge of Uzbek and Russian languages, working knowledge of English.

## **PROVINCIAL IMPLEMENTATION TEAM (PIT): MONITORING & EVALUATION OFFICER**

**Location:** ADMP PIT Office (Andijan, Fergana and Namangan)

**Reporting to:** Project Manger and Regional Coordinator

### **Duties and Responsibilities:**

The Monitoring and Evaluation Officer will have the lead responsibility for designing and operating the ADMP PMU's Management Information and Monitoring and Evaluation Systems and building up and maintaining the data base necessary for the ADMP PMU to do its work efficiently and effectively. The principal duties of the post will be to:

- Ensure that the monitoring and evaluation of the Project is carried out in accordance with the Project's guidelines and procedures;
- Organise a transparent progress monitoring and reporting system with adequate indicators to allow the Project staff to effectively monitor the progress, performance and impact of the components no later than six months after loan effectiveness;
- Draw up terms of reference for the ADMP Baseline Survey;
- Design and conduct the ADMP Baseline with the assistance of national Technical Assistance as considered needed;
- Contribute to the Project Start-up Workshop in Project Year 1 (PY1) with respect to Project-related Monitoring and Evaluation (M&E) issues;
- Organise Project annual review and planning workshops. Specifically the Project's Annual Performance Reports will be discussed in detail and their content subject to review. Valuable lessons and successful cases collected in the Annual Performance Reports will be brought forward and disseminated and to the extent possible replicated within the Project. Indicators that do not add any value will be dropped. In this way M&E data will be employed as a management tool;
- Define the need for specific studies, design them and supervise their execution;
- Conduct poverty assessment interviews based on developed questionnaires with the beneficiaries of the ADMP (annual repeater data);
- Ensure the receipt and review of periodic monitoring reports received from implementing agencies (e.g. universities, institutions and PFI) and prepare overall progress reports;
- Prepare an Annual Performance Report for all Project activities for the consideration of the RRA/ADMP PMU, PFIs, the Inter-agency Council and IFAD;
- Assist as required external monitoring, review and evaluation missions visiting the ADMP;
- Collect and document information on lessons learned, including case studies and special research;
- Record and report physical progress of M&E indicators against AWPBs;
- Report to IFAD annually on the IFAD Results and Impact Management System (RIMS) indicators; and
- Liaise with other RRA/ADMP PMU staff in the interpretation of their respective annual reports.

### **Qualifications:**

- A higher degree in economics, agriculture or related social sciences or closely related discipline; including experience of poverty-reducing, integrated rural development, especially its targeting, integration and gender aspects.
- Experience of rural finance would be highly desirable.
- Fluent written and spoken English and Uzbek and computer literacy is a requirement.
- The selected candidate would be expected to have a creative and pragmatic approach to problem-solving and the ability to think in terms of socio-economic and administrative systems.

## Value Chain Development Adviser (International)

### Duties and Responsibilities

A Value Chain Development Adviser (VCD Adviser) will be appointed by the Project. Her/his role will be to provide technical support to the PMU on a periodic basis concerning ADMP development of value chains, and business mentoring to value chain stakeholders, particularly Leading Entities (LEs) and input suppliers and service providers, active in the selected value chains and receiving Project support.

The VCD Adviser, with assistance from the PMU, will support the directors and other key staff of LEs and other entities active in the selected value chains in developing the procedures and systems needed to make them operational and effective in relation to: (i) business and investment planning (ii) supplier relationships and products collection and storage; (iii) crop/livestock product development; (iv) processing and marketing in local centres.

The VCD Adviser's duties and responsibilities will include:

- carry out a study on the future demand for selected products (volume, product types, location, competitiveness with imports) and, if needed, adjust scope and volume of the investment in this sector accordingly;
- analyze broad developments and challenges within Uzbekistan food industry value chains, from production, primary processing, packaging, processed products and retail, focusing on market structure, key factors of growth, and sector challenges;
- assist in designing a value chain development and business management training programme, including the detailed training modules, and training of ADMP contracted trainers who will teach LE owners/managers in these fields;
- Assisting the PMU and contracted service providers/consultants in designing and implementing the VCDP process;
- Providing oversight and guidance for the implementation of LE activities, including:
  - i. development strategies for improving links with producers and producer organizations;
  - ii. strengthening aggregation activities and improvements to product quality along the value chains;
  - iii. business management, negotiating skills, marketing and quality control;
  - iv. market studies and test marketing;
- Conducting seminars/training/workshops for LE technical personnel to ensure that they are current with the recent international best practice in livestock industry management;
- Preparing technical reports as may be required pertinent to the tasks undertaken.

### Qualifications

- Minimum 10 years of experience in a mix of economic growth, trade, or value chain development, competitiveness, or agricultural development Projects;
- Minimum 5 years of experience in the private food manufacturing sector;
- Demonstrated success in implementing Projects increasing the competitiveness and inclusiveness of agricultural value chains, preferably with a focus on livestock products;
- Demonstrated knowledge of the latest developments in advancing good/best practices in value chain development;
- Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to intervening;
- Experience as a senior project manager for large and complex private sector agricultural development projects.

## **Social Mobilizer (national)**

A national consultant will be recruited to work as Social Mobilizer. S/he will take the overall responsibility for planning, implementation and monitoring of the Project support to *mahalls*. S/he will also provide assistance in relation to the planning and conduct of the demonstrations and FFSs as part of the Project's support to farmers. S/he will report to Project Manager and, for day-to-day matters, seek guidance of Gender and Youth Specialist of the PMU. More specifically, her/his tasks include:

- Coordinate with the teams conducting Value Chain Mapping exercises, as well as Regional and District *hakimiats*, to identify *mahallas* which are located in or near the Project supported value chains in each Region;
- Prepare plans to organize meetings with *mahalla* leaders and inform them accordingly;
- Prepare materials for information dissemination during the meetings with *mahalla* leaders, as well as those to be used by them for their own awareness building efforts toward the community members. In addition to detailed introduction of the Project and specific modalities of engagement with LEs, the topics of the materials will include such broader issues as inclusive value chains, decent work and economic empowerment of women;
- Carry out meetings with the *mahalla* leaders and prepare reports;
- Pay visits to selected *mahallas* to ensure that the community members are aware of the Project and their opportunities;
- Assist the planning of demonstrations and FFSs by consultants by linking them with relevant *mahallas* and potential model farmers; and
- Propose a Grievance Redress Mechanism (GRM) under the Project for consideration of Project Manager

The consultant should have a minimum 5 years of professional experience in community development or social mobilization. S/he should have demonstrated capacity to engage with rural communities, including disadvantaged members. Knowledge of local level government structures is an asset. Proficiency in English and Russian is required.

## **Youth Business Development Specialist (National)**

The Youth Business Development will take the overall responsibility for planning, implementation and monitoring of the Project' actions to train and mentor the youth who will apply for loans under the Youth Window. The consultant will work closely with the Chamber of Commerce and Industry (CCI) and be located within its premises with a view to ensuring smooth communication and collaboration, and soliciting their professional advice and support. S/he will report to Project Manager and, for day-to-day matters, seek guidance of Gender and Youth Specialist of the PMU. More specifically, her/his tasks include:

- Propose a procedure for the candidate identification, taking into consideration the experience of CCI and Business Women's Association (BWA), as well as the roles by the relevant colleges in the Project area, local *hakimiats*, *mahalla* leaders and other Project stakeholders;
- Prepare an overall training plan for the youth candidates which combines group sessions for business development and management, and mentoring, coaching and hands-on training (internship, on-the job-training and apprenticeship);
- Identify resource institutions, including business enterprises, and individuals who agree to provide hands-on training to the candidates;
- Prepare an annual plan of the training and organize group training sessions with the help from CCI; and
- Establish a database of the youth trainees for continuous monitoring and timely interventions as required

## **Business Women's Association of Uzbekistan**

The Project will engage the services of BWA for conducting training to current and future female entrepreneurs in the agriculture sector and youth start-ups in the target Regions. Such services will be based on BWA's experience in promoting and supporting female business leaders, but will be fine-tuned to promising agricultural value chains in the Fergana Valley and serve to improve inclusiveness of those value chains. The BWA's services will be provided beyond the Project's LEs and include the following:

- Identify female entrepreneurs, current and potential, who plan to enter into agribusiness in the Project area;
- Provide hands-on support for business development and market exploration to each identified entrepreneur, and coordinate with resources, including those among BWA members, for their access to specific advisory services and credit;
- Plan and organize study tours for selected trainees, prepare post-visit reports for submission to PMU;
- Plan and implement seminars on agribusinesses for women in each Region with a view to increasing their exposures to the latest developments on export market, new technologies and products, consumer preferences and other topics;
- Assist the Youth Business Development Specialist in preparing the procedure for candidate selection, triaging plan preparation, identification of host enterprises for internship, and monitoring; and
- Prepare at least five knowledge products (newsletters, training brochures, etc.) on the BWA's activities under the Project which will be disseminated by the PMU

Training activities will be conducted in each Region with the involvement of BWA's branch office, while the overall responsibility for planning, implementing and monitoring of its activities under ADMP will rest with the head office in Tashkent. The BWA will assign one of its staff as ADMP coordinator, who will be responsible for coordination with the PMU, and preparation of AWPB and regular reports.

## **Ruminant Nutritionist (International)**

An international Ruminant Nutritionist will be recruited to give short refresher training courses at the SRI-LPF and/or agriculture universities in ruminant nutrition principles, in the use of newer nutrient and digestibility analysis systems appropriate for Uzbek animal scientists, ration compounding and feed bunk management.

S/He will mentor the SRI-LPF staff in designing dairy cattle feeding trials according to the MOU from the PMU and will assist in formulating the test ration. A report will be submitted on recommendations for compound feed ingredients available during each season and imported ingredients, if any, for rations for ruminants, poultry and fish. S/he will have a university degree from a recognized university and preferably an advanced degree in animal nutrition. S/he will have a minimum of 5 years relevant experience and be fully conversant in written and spoken English and preferably will be conversant in Uzbek or Russian.

## **Food Animal Veterinarian (International)**

The international Food Animal Veterinarian will be recruited for 4 work-months in 2 trips. S/He will design a practical refresher training curricula which covers clinical, curative and preventative topics of relevance to livestock-owning stakeholders. These topics will include but not be limited to: pregnancy diagnosis by ultrasound, cattle and small ruminant foot care, dehorning and castrating young stock, and strategic deworming. S/He will be assigned as an associate clinical veterinarian to each demonstration Zoo-Veterinary Station and will manage the mobile veterinary clinics. S/He will work with regional veterinary authorities and *mahallas* in order to establish a herd health practice in the locale of the demonstration Zoo-Veterinary Station. The training will aim to build technical and



managerial capacity in one or more young Zoo-Veterinary Station vets as well as train local regional vets in newer technologies and use of newer equipment.

S/he will have a doctor of veterinary medicine or equivalent degree from a recognized university. S/He will have at least 3 years of private or specialty animal health practice experience in a food or mixed animal rural practice. S/He will be fully conversant in written and spoken English and preferably will be conversant in Uzbek or Russian.<sup>140</sup>

### **Farmer Field School Management Specialist (National)**

Experienced national Farmer Field School Management Specialists will be recruited (for up to 60 work-months in total) for the three Project regions. S/He will collaborate with the implementing institution<sup>141</sup>, national subject matter specialists and leading farmers/agri-business persons to: (i) design the various FFS curricula based on the demand for specific technical assistance from the entrepreneurs; (ii) set up local FFSs in Project districts appropriate to the LEs needs for training to input suppliers; (iii) supervise the three-week TOT training course; and (iv) in collaboration with the implementing institution, support the training of farmers in the field. Project FFSs will operate under four interrelated components, i.e. irrigation water management, crop and livestock diversification and modernization, value chain development and constraint analysis. Other components may be added to fit Uzbek conditions and priorities. The specific curricula themes will also respond to demands from entrepreneurs and may cover vegetable, spice, nut, fruit or forage crops; large or small ruminant livestock; fish, poultry, rabbits or other livestock; or the processing and preserving of any of these products.

The consultant will collaborate with local institutions having previous experience in setting up and running FFSs in Uzbekistan and recommend local/Central Asia region (Uzbek- or Russian-speaking) subject matter specialists as needed. S/He will be an experienced FFS consultant with at least 5 years of experience, preferable within the Central Asia region. S/He will be fully conversant in written and spoken English and preferably will be conversant in Uzbek or Russian.

### **Plant Inspection Laboratory Specialist (International)**

An experienced Plant Inspection Laboratory Specialist or Agronomist will be recruited to support the Regional Plant Quarantine Laboratory design, construction and operation. S/he will collaborate with Plant Quarantine Committee staff at central and Fergana Valley region levels particularly for: (i) managing and operating the branch Plant Quarantine Laboratory (or others) to meet international standards; (ii) training staff in operation and maintenance of laboratory equipment, including quality control; (iii) identifying plant risks from various sources and prepare plans for mitigating the risks; and (iv) helping Government set policies that facilitate importation of new plant material for the benefit of Uzbek households, farmers and agri-firms without compromising the plant sanitary situation in the country.

S/he will have a university degree from a recognized university and at least 5 years of relevant experience in plant health import/export inspection. S/He will be fully conversant in written and spoken English and preferably will be conversant in Uzbek or Russian.

### **Veterinary Subject Matter Specialists (International)**

Short-term technical assistance will be contracted from qualified veterinary medical professionals for training and mentoring on subjects including: clinical diagnosis and preventive medicine, obstetrics and gynecology, post-mortem diagnosis, disease investigation, disease treatment and prevention in livestock (including horses) and companion animals. Specialists in applied pharmacology, ultrasound diagnosis of pregnancy, veterinary business management or other specialties may be recruited as required. These subject matter specialists will deliver short-course training and refresher training and

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<sup>140</sup> Food Animal Veterinarians working in New Zealand or Australia have the most appropriate experience and could be contracted.

<sup>141</sup> The suggested partner is the Uzgipromeliiovodhoz Institute, MAWR.

draft training curricula (in Russian or English). Whenever possible, qualified contractors will be sourced from Central Asia – Eastern Europe regions who are fluent in Russian as well as having demonstrated competence in their subject matter. Topics and materials prepared will be approved by the Project's International Food Animal Veterinarian.

### **International Irrigation Engineer (International)**

International Irrigation Engineer (IIE) will be selected by RRA to get technical assistance in modern irrigation technologies, review of applications and design solutions provided by the Consultant, advise in operation and maintenance activities, etc. The IIE will report to the RRA Manager and the Irrigation Engineer in technical issues.

This is a part-time position (overall 2 months) with four (4) country visits. Below are the duties and responsibilities in detail:

#### Duties and Responsibilities:

- Review applications with typical solutions and provide recommendations for their improvement;
- Review of deliverables of the Consultant, including: feasibility studies, preliminary and detailed designs;
- Support in drafting technical specifications for selection of agro-meteorological stations' supplier; and selection of contractor(s);
- Support/participation in technical evaluation panels;
- Support the RRA and the Consultant in selection of modern efficient solutions within Sub-Component 3.1.

#### Qualifications:

- Master's degree in Irrigation, Hydro-technical, Agriculture or related disciplines;
- At least 10 years working experience in similar projects;
- At least 5 year experience in drip irrigation applications;
- Regional experience will be considered as plus;
- Coordination and good interpersonal skills;
- Fluent knowledge in English, Russian and/or Uzbek will be considered as plus.

## Business/Technical Advisers (International and national)

### Objectives

Throughout the proposed assignment (the "Assignment") ongoing advisory support (coaching) is to be provided to [LE NAME] The Assignment is aimed at implementing changes in several business areas and stepping up the business as a whole. More specific objectives will be defined during the diagnostics and planning phase of the Assignment and summarized in the work plan.

### Scope of Services

The Assignment scope includes the following tasks:

- Document review
- Identification of three key improvement areas, that may include the following:
  - Finance
  - Operations, systems and quality management
  - Sales and marketing
- Preparation of work plan
  - Advisory and coaching on the 1st key improvement area (Finance)
  - Advisory and coaching on the 2nd key improvement area (Operations, systems and quality management)
  - Advisory and coaching on the 3rd key improvement area (Sales and marketing)

### Implementation Arrangements

#### Assignment Timing

The Assignment is planned to last XX. The Assignment will start [DATE] and should be completed by [DATE].

The consultant will be engaged in the Assignment implementation for up to [NUMBER] working days, including up to [NUMBER] working days for the diagnostics and planning phase.

#### Schedule

The tentative implementation schedule is as follows; a more detailed Schedule will be submitted as part of the work plan at the end of Phase 1, to include the list of planned activities for Phase 2 and related deliverables.

ACTIVITY / MONTH / WEEK	MONTH							
	1	2	3	4	5	6	7	8
<b>Phase 1: Diagnostics and planning</b>								
1.1. Document review								
- <i>Review of existing business plan or other relevant documents</i>								
- <i>Assessment of current business state, local/ international trends</i>								
- <i>Calculation of key ratios, analysis of trends</i>								
- <i>SWOT analysis</i>								
- <i>Verification of growth potential</i>								
1.2. Preparation of work plan								
- <i>Preparation of Business Diagnostics Scorecard</i>								
- <i>Identification of three key improvement areas</i>								

<b>Phase 2: Implementation of on-going advisory support and coaching</b>							
1.1. Advisory and coaching on the 1st key improvement area (Finance)							
1.2. Advisory and coaching on the 2nd key improvement area (Operations, systems and quality management)							
1.3. Advisory and coaching on the 3rd key improvement area (Sales and marketing)							
1.4. Final report submission							
<b>Review Meetings</b>							

### Consultant Selection

The consultant selected for this Assignment is [NAME] specialized in the areas [FOR EXAMPLE] of market analysis, marketing strategies, strategic planning, financial analysis and management, restructuring projects and HR management as well as delivery of corporate trainings. The consultant has been selected from the pool of pre-qualified consultants by the beneficiary enterprise. Following experts will be engaged in Project implementation by [NAME]

<b>Individual Name</b>	<b>Expert</b>	<b>Specialization</b>	<b># of days</b>	<b>Rate</b>	<b>Total</b>
		Sales & Marketing Expert (Project Coordinator)			
		Finance and Operations Expert			
<b>Total Direct Cost</b>					

### Deliverables and Reporting

The consultant is expected to follow the deliverables and reporting requirements as agreed with the beneficiary enterprise and the PMU.

In line with the scope of services and Assignment implementation schedule, at the end of Phase 1 the consultant is expected to deliver a work plan. The work plan will cover planned activities, a timeframe and deliverables for the ongoing business coaching in subsequent phases of the Project. Upon completion of the assignment, a Final Report will be submitted summarizing the progress reports submitted at the interim stages, recommendations made throughout Project implementation, changes implemented and also further actions to be taken by the enterprise management.

The course of Assignment implementation will be monitored by the PMU; 4 review meetings will be held with the beneficiary enterprise and consultant.

### Budget

The total cost of the Assignment is [AMOUNT] UZS.

## Annex 2: Sample checklist for regional monitoring of new borrowers

Borrower name \_\_\_\_\_

Date \_\_\_\_\_

Sub-loan conditions	YES	NO
1) Is the borrower and the loan amount the same as approved by the investment committee?	Explain:*	Explain:
2) Is the borrower residing in one of the Project regions?	Explain:	Explain:
3) Is the borrower engaged in in entrepreneurial, agriculture-related productive activities?	Explain:	Explain:
4) Is the loan extended for working capital, investment or both?	Explain:	Explain:
5) Is the loan extended to a specific target category ( <i>dekhan</i> farmer, low-income, women, youth)?	Explain:	Explain:
6) Did the borrower receive the full amount as per the loan agreement?	Explain:	Explain:
7) If the loan is in foreign currency, is this based on the borrower import/export activity?	Explain:	Explain:
8) Is repayment schedule linked to the borrowers' business and household cash flows and takes into account specifics of agricultural business production cycles?	Explain:	Explain:
9) Is grace period (if any) offered depending on borrowers' agricultural production cycles and cash flows?	Explain:	Explain:
10) What is the interest rate on the loan?	Explain:	Explain:
11) Did the borrower pay any other fees to the bank, either formally or informally?	Explain:	Explain:
12) Did the borrower contribute to financing of his/her activity?	Explain:	Explain:
13) How long did the borrower wait to receive the loan after the application submission? (Indicate number of days and verify with loan application)	Explain:	Explain:
14) When the borrower pays back a loan instalment, does s/he get an individual receipt with the bank signature/stamp proving the repayment?	Explain:	Explain:
15) Did the borrower provide guarantee or collateral – and which type?	Explain:	Explain:
16) What are borrower's suggestions for improving any of the stages of the loan process?	Explain:	Explain:
17) Would the borrower rate his/her experience as generally satisfactory? If not, list reasons for low satisfaction.		

Regional Rural Finance Officer \_\_\_\_\_ (name)

\* Each response should be explained as appropriate (i.e. indicate exact amount, specific region etc.).



### **Annex 3: Detailed Selection Procedures for Component 3**

**Information and Awareness Campaign.** The decision-making (selection) procedure to be followed for the award of competitive funding is guided by the principles of transparency, demand-driven allocation, market linkage, and cost sharing. Component implementation will be based on a set of criteria that will ensure that the Project resources reach the intended target groups and will start with an information and awareness campaigns. The information and awareness campaign will be undertaken by the PMU through workshops organized within three months after the loan effectiveness, and will include at least BAISs and AISs authorities, WCAs chairmen and directors, *dekhan* and private farmers. The objective of these workshops will be to sensitize local authorities, BAISs and WCAs about Component 3, its objectives and eligibility criteria, and application and selection procedure. Provisions are made for these activities in the project operation budget. The specific steps each application will have to go through, in chronological order are described below.

**Application.** Request for funding from the CRR1 Component will come to the Consultant from WCAs based on thorough consultation with farmers, BAISs and AISs. The application will be done in writing and should consist of required information and data for PMU decision making. Sample application forms are provided in Attachment 5.3.1.

All applications will go through three steps selection process of: (i) pre-qualification; (ii) screening and ranking; and (iii) final selection. The three steps are described below.

#### **Pre-qualification**

The first step will consist of a desk review of the applications submitted to the Consultant. It will be carried out by PMU Consultant shortly after the set deadline for submission of applications for funding. The following applications will be refused without further consideration: (i) application is not provided in accordance with agreed format or missing key data; (ii) investment proposals are out of the Project priority area; (iii) the technical conditions of the main and secondary canals are of sound level or rehabilitated/modernised under the other donors funded projects; (iv) infrastructure other than tertiary irrigation/drainage systems. Following the desk review the Consultant will conduct field visits to verify the accuracy of the provided data, link with the entire programme target group and activities supported under Component 1. The field review will also assess the current condition of the proposed infrastructure and technical feasibility of the proposed investment.

#### **Screening and Ranking**

The prioritization of investment proposals passing the pre-qualification and field assessment by the Consultant will still require further data collection and analysis to be compiled in investment-specific feasibility studies. The feasibility studies shall mandatory cover the key engineering and socioeconomic aspects that will enable generating the net benefit stream arising from the proposed investments and therefore comparing the viability of each investment proposal with a view at minimising the investment cost. For easier comparison a synthetic indicator such as the Internal Rate of Return (IRR) will be computed as to be described in the PIM. A minimum cut-off level for the IRR will be applied at this step of the selection process. Proposals showing an IRR lower than 10% will be rejected.

All the remaining pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the following system. The highest score for each of the evaluation criteria would be given a score of 1.00. The scores for evaluation criteria of the other proposals will then be computed on a sliding scale as a proportion of the highest score.

Investments ranking for proposals will be based on the system consisting of calculation, for pre-qualified project proposals, of a synthetic indicator including: (i) financial viability and (ii) estimated investment cost. The respective weights given to the two factors would be 0.7 and 0.3 respectively (i.e. the financial viability and the required investment would be the main determinants for investment's prioritization).

The following formula will be used for calculation of the ranking value:

$$\text{Ranking Value} = 0.7 \times (A) + 0.3 \times (B)$$

**A** – Score for IRR

**B** – Score for estimated investment cost

The main responsibility for carrying out ranking of investments will rest with the Consultant, based on the data and calculations provided in the outcomes of feasibility studies.

All the proposals for infrastructure investment funding award will be approved by the Inter-agency Council (IC). The PMU will review and clear the evaluation and ranking provided by the Consultant and provide recommendation to the IC for funding award.

The main responsibility for carrying out feasibility studies and ranking of investments will rest with the Consultant.

### **Final Selection**

The Consultant will submit the results of the selection process to the PMU for final review and proceeding with PSC approval and inclusion in the Annual Work Plan and Budget (AWPB).

Approval by IFAD of the selection of proposals (sub-projects) will be required prior to the start of their implementation.

**Allocated Budget per Project.** No fixed pre-allocation of funds per WCA or Project area regions/districts will be undertaken for infrastructure investments. The award of competitive funding will be on a voluntary, demand-driven basis for eligible investment proposals. Proposals with limited possibilities for future multiplier effect will not be considered as eligible under the CRR I Component.

**Environmental Guidelines.** No significant negative environmental impacts are expected from the infrastructure investment. The main foreseeable environmental concerns are the ones associated with the management and disposal of excavated materials and construction debris. However, all approved proposals/designs that are to be implemented through the CRR I component funding will be required to meet requirements of the environmental legislation of Uzbekistan, to be verified by environmental assessment of each developed design. Submission of required documents for Environmental Assessment will be under the responsibility of Consultant and will be financed from the component budget.

Provisions are also made for *International Irrigation Engineer* (part time) to support the Project on drip irrigation and other modern applications.

**Design of selected systems.** Development of detailed engineering design for selected systems will be undertaken by the Consultant. Final approval of designs, including approval by the State Expertise Committee and Environmental Assessment as per the legislation of the Republic of Uzbekistan, will be the responsibility of the Consultant.

**Procurement and Execution of Works.** The PMU will have the main responsibility for procurement of works under the Component. Procurement of works will be carried out in accordance with the IFAD Procurement Guidelines and thresholds and Sample Bidding Documents for procurement of civil works. Details are provided in the procurement section of this manual.

**Supervision of Civil Works.** Supervision of civil works will be carried out by the Consultant under the direct guidance of the PMU/PIT Engineer. The Engineer and Consultant will verify bill of completed quantities, cumulative bill of quantities, and requests for interim payment, as well as completion certificate prepared by Contractors. Representatives of relevant WCAs and AISs will be members of the acceptance committee issuing the Certificate of Final Completion on the works. The detailed formats of works supervision as per the relevant legislation of the Republic of Uzbekistan as well as the TORs for consultancy services will be discussed and included in the PIM during the project start up workshop.



**Operation and Maintenance.** The essential requirement for the sustainability and longevity of the infrastructure investment is operation and maintenance responsibility. The application must consist of an endorsement letter from the relevant BAISs/AISs and WCAs that the rehabilitated/constructed infrastructure (fixed assets) will be revalued on their balance sheet and provisions will be made in the budget for maintenance of the infrastructure.

Implementation of activities under Sub-component 3.2 will be managed by the PMU/PIT and implemented through the Consultant and Supplier of the methodological equipment.

Trainings on O&M of reconstructed irrigation systems will be elaborated and conducted by the Consultant. Trainings will be arranged for the operational staff of WCAs and BAIS regional and district divisions on the theoretical and practical aspects for O&M of the reconstructed inter-farm pressurized systems. Trainings will be organized for WCAs and AISs staff responsible for operation and maintenance of the systems selected for modernization under the CRR1 component. Tentatively 10 trainings for WCAs and 6 for BAIS/AISs.

Training on Agro-meteorological stations will be arranged by the supplier of agro-meteorological stations for WCAs and BAIS/AISs staff: (i) to deliver skills for operating and maintaining the stations; (ii) on how to use information to schedule irrigations; (iii) on how to coordinate their work with *dekhan* and small private farmers; etc. Overall 4 sessions are planned for these trainings.

**Attachment 5.3.1**

**DRAFT SAMPLE APPLICATION FORMS FOR INVESTMENTS**

**Date:**

<b>BAIS/AIS/WCA:</b>
<b>Region/District:</b>
<b>Village(s):</b>
Number of beneficiaries including <i>dekhans</i> (as detailed as possible):
Proposed investment in tertiary rehabilitation (systems include command area, current condition of the system, water source (main, secondary, well, pumping station), technical conditions of the source, indicative lengths o and type of proposed investments (as detailed as possible):
Rationale/expected direct benefits from investments (current service level, improved agricultural production):
Direct beneficiaries from the system (people/households):
Setup for operation and maintenance and source of financing:
Complementarity with the ADMP other activities and other projects:
Would the proposed investment support the development or expansion of small business in the community? (description):
Would the investment provide opportunities for high value crops? Estimated area and crops:
Proposed mitigation of any adverse environmental impacts/conflicts among water users:
Estimated total investment cost:

**Attachments:**

- Endorsement by BAISs/AISs/WCAs to provide follow up O&M of the assets.
- Decision of WCAs and BAISs for submission of proposal.
- Any related available documents such as maps, reports, assessments.

## **Annex 4: Call for Proposals for selection of PFIs for RGF (Table of Contents)**

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## Appendix 6: Planning, M&E and learning and knowledge management

### A. Introduction

1. Beyond its role in data management and the monitoring and measuring of project indicators, results and impacts, the system for Planning, Monitoring & Evaluation and Learning system (PME&L) of the ADMP will be developed as an integral part of the process of Project implementation. Among others, its purpose will be to support dialogue and interaction between the public and private sector stakeholders who are responsible for the Project investment and to facilitate participatory learning and ownership of the Project. More specifically, the PME&L system will be designed to: (i) provide updated information on the goals, results, effects and impacts of the project; (ii) support the Inter-agency Council (IC) and Project management in making decisions about the strategies, actions and investment expenses that lead to achievement of the objectives; (iii) strengthen the interrelationship of the PMU with the various strategic partners who will be involved in implementation; (iv) be an instrument for strengthening the capacity of the participating value chains for local development processes and investments in accordance with current policies and directives; (v) ensure gathering sufficient systematized evidence to accompany the project's impact assessment at completion; and (vi) allow the development of spaces for learning, exchange of experiences, good practices and dissemination of results. Thus, the system will also be closely linked to the Project's broader agenda for the management of knowledge.

2. The Project M&E system will track and verify the levels of achievement of Project outputs, the associated outcomes, and the success in achieving the project objective and its development goal. These levels are all causally connected as set out in the Project Results Framework (at the front of the Main Report section of the Project Design Report), which provides the framework that thus constitutes the structure for the project M&E system. To a large extent, the M&E system will be participatory and thus involve the supported Leading Entities directly benefitting of the Project interventions as well as other involved value chain's stakeholders. The Project's M&E Specialist, as part of the PIT, will assist the PMU in the data management in a standardised system, in keeping a central system to compile overall monitoring and evaluation information, and in conducting studies at project starting / baseline survey, as well as mid-term and end of Project to monitor the progress towards the intended impact.

3. Beneficiaries' participation in Project monitoring will be ensured by involving the target groups, with special effort to include women and youth by organizing the interviews at suitable times and venue and applying appropriate interview techniques. Monitoring will include data collection in forms of individual interviews, focus group discussion or case studies.

4. The Planning, Monitoring & Evaluation and Learning system (PME&L) will consist of the following subsystems:

- **Planning.** The linked Annual Work Program & Budget (AWPB), which uses as inputs the Results Framework, operational plans, participatory assessments and LE' VCDPs/business plans for the development of participating value chain stakeholders, and the Project's exit strategy/plans for sustaining advances and outcomes after closing;
- **Monitoring.** The monitoring subsystem, which will manage periodic reports, reports of field visits, progress reports, monthly meetings of the different Project implementation units, specific reports and information generated during supervision missions, and joint reviews of IFAD and the Government. **All M&E data will be disaggregated by sex, poverty level, farm type and age categories and will be assessed relative to the Project's targeting and gender checklists** (see Appendix 2).
- **Evaluation.** The evaluation subsystem, which is based on the baseline study and impact indicators (RIMS), internal and/or external evaluation reports and studies on Project outcomes and impacts, and the Project completion report; and

- **Learning and knowledge generation.** The learning subsystem, consisting of a systematic process oriented collective reflection by the Project actors on the experiences during the implementation of the Project in order to refine Project methodologies and approaches, exchange learning and knowledge, and generate new knowledge.

## B. Monitoring and Evaluation

5. **Results Framework.** A principal guide for the implementation and monitoring of the Project will be the Results Framework. The results framework with specific emphasis on its targets will be refined during the first year of implementation (2018), as part of the Project initiation activities. This will serve both to better ground the Results Framework within the local context as well as to promote ownership by the Project team. In addition, the Results Framework, targets and indicators will be reviewed thoroughly during the midterm evaluation of the Project and, if necessary, updated annually as part of the adaptive learning process based in the monitoring of the Project's implementation. The objective of having an ongoing review of the results framework is to encourage its use as a tool for Project management. Also the use of the Results Framework should assist the Project team to work more coherently towards the same goals and structure of results and impacts, while providing Project management with a tool for ensuring Project's alignment with the strategic priorities for profitable, participatory value chain development embodied in the design and in accordance with national and provincial policies, strategies and programmes. The ADMP's Monitoring and Evaluation Specialist as part of the PIT and PMU would have lead responsibility for all internal M&E of the Project.

6. **Regular reporting.** Performance monitoring will concentrate on the financial and physical outputs and the outcomes of Project activities and be based upon semi-annual and annual **progress reports**. The RRA/ADMP PMU would submit progress reports in English to Government (MAWR and MOF) and IFAD.

7. **Impact assessment.** The revised IFAD corporate Results and Impact Management System (RIMS)<sup>142</sup> includes a provision for rigorous outcome and impact assessment for a subset of projects (approximately 15 per cent of the portfolio), on an "attribution" basis, through its impact assessment project. It is not foreseen that the ADMP is part of such subset. Nevertheless, conformingly to the new RIMS, the Project will conduct a Project impact assessment at least by estimating contribution as opposed to attribution, based on quantitative annual outcome surveys combined with interviews to capture qualitative aspects. The exercise could be carried out with support provided by IFAD. The ADMP will report on impact through the Project completion report.

8. **Monitoring.** Provision has been made for appropriate international and/or national TA to assist the RRA/ADMP PMU, principally the Monitoring and Evaluation Specialist with both the initial design of the progress reporting and participatory impact assessment and evaluation systems and follow-up M&E. An M&E manual will be prepared at onset of the Project as an integral part of the PIM.

9. An initial set of **indicators** have been provided in the Project's Results Framework, presented at the front of the Main Report section of the Project Design Report. These initial indicators will be refined and finalised as an output of the Project Start-up Workshop. Indicators will include the most specific, measurable, achievable, and relevant indicators to capture ADMP's progress towards its Project development objective and intended impact. The indicators will include also a number of the output and outcome Core Indicators (CI) released in the new IFAD RIMS. Data sources for the ADMP performance indicators will include: (i) the State Committee on Statistics; (ii) the Centre for Economic Research; (iii) the Ministry of Agriculture and Water Resources; (iv) all institutions involved; (v) beneficiaries; and (vi) the Project M&E database.

10. Key ADMP performance indicators include:

At **Goal** level:

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<sup>142</sup> Taking IFAD's Results and Impact Management System (RIMS) to the Next Level, EB 2017/120/R.7/Rev.1, April 2017.

- At least 80 per cent of the rural households (of which 30% women) benefitting of the Project investments report at least a 20% increase in income (data are disaggregated by sex, youth categories, poverty level, farm type);<sup>143</sup>
- At least 75,000 households receive services promoted or supported by the Project.

At **Development Outcome** level:

- At least 10,000 incremental full-time equivalent jobs (30% for women) are created as result of the Project's activities.<sup>144</sup>
- At least 70 per cent of supported smallholder producers including *dekhan*s report a 20 per cent increase in sales along the value chains.<sup>145</sup>

11. In addition, as aggregate result of Project's interventions, the Project will measure the number of persons receiving services promoted or supported by the project (disaggregated by the sex of the head of household, small and medium-sized enterprise owner or group leader, and youth category).<sup>146</sup>

12. **Project start-up activities** will include: (i) finalisation of TORs for key staff including the PMU, PIT and the required national and international Technical Assistance; (ii) recruitment of the key staff and consultants; (iii) conducting a gender sensitive, livelihoods-oriented Baseline Survey plus making arrangements for subsequent annual outcome surveys, Participatory Rapid Rural Appraisals (PRAs) and Participatory Impact Monitoring with particular attention on targeting, gender and socio-economic improvement issues; (iv) a call for expressions of interest in becoming PFIs and selection of PFIs; (v) formulation of an Annual Work Plan and Budget (AWPB) for the Project's first-year of activities; (vi) finalisation of a Procurement Plan for the first eighteen months; (vii) an initial deposit in the Project's Designated Account by IFAD. The authorized allocation for the DA, as well as detailed disbursement modalities will be defined in the Letter to the Borrower/Recipient (LTB/R).; (viii) establishment of the Project's PME&L system; (ix) finalisation of the Project Implementation Manual (PIM) including manuals for each of the Sub-components; and (x) holding a Project start-up workshop, while initiating promotion of the project at regional level.

13. **Project start-up workshop.** Among those invited to attend the workshop will be the representatives of key sectoral stakeholders and participants in the ADMP, including among others: male and female *dekhan* and private farmers, agri-firms, entrepreneurs and market services providers representative of the project's target group; candidate PFIs; business development services providers; the authorities of the universities/ R&D institutions that are expected to participate in the project; relevant farmers, and their organizations (e.g., UzRiba Fisheries association), LEs and business organisations; government authorities at central, provincial and district levels; representatives of key socio-economic research institutions (e.g. the State Committee of the Republic of Uzbekistan on Statistics and the Centre for Economic Research (CER)); representatives of local government and community-based organisations reflecting the Project's intended target groups, in particular rural women's organisations (including Women's Business Association); representatives of research institutions (including SRI-PFL) and public laboratories for quarantine and SPS standards (including Uzglavgoskarantin); representatives of other projects concerned with rural poverty reduction and development; and representatives of development partners, e.g. the FAO, the World Bank, the UNDP, the ADB and GIZ; other stakeholders as relevant.

14. Key outputs from the workshop would include guidance on: (i) Project's components content and implementing modalities; (ii) refinement and finalisation of the PIM; (iii) refinement and finalisation of the Project's targeting criteria and M&E indicators; (iv) finalisation of an Annual Work Plan and

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<sup>143</sup> This indicator is inspired to the RIMS Impact-level indicator "Number of people experiencing economic mobility", corresponding to SDG target 1.1 and 1.2, but taking into account the specific aspect of income, where the ADMP is expected to generate an impact. These Project's direct beneficiaries are estimated around 75,000 households. These include stakeholders benefitting of credit lines supported by the ADMP, as well as of trainings/other supports provided by the Project and by the Project's supported LEs, or from FFS curricula and guided exposure to technological demonstration plots.

<sup>144</sup> RIMS Core Indicator 2.2.1.

<sup>145</sup> RIMS Core Indicator 2.2.5.

<sup>146</sup> Core RIMS outreach indicator.

Budget (AWPB) for ADMP's first-year activities; and (v) finalisation of the first eighteen-month Procurement Plan. Outputs related to implementing modalities and associated results and impact would feed in to the design of the Project's Management Information System (MIS) and PME&L system.

15. **Baseline Survey.** The refined and finalised indicators arising from the Project Start-up Workshop would shape the Project's Baseline Survey. The objective of the baseline survey will be to establish benchmarks for time-series comparisons between Project direct beneficiaries, flow-on beneficiary and non-beneficiary "control" populations. The ADMP M&E Specialist would thereafter carry out annual outcome surveys, including PRAs and Participatory Impact Monitoring. Survey data would be mutually supplemented as appropriate through regular exchange with Government's State Committee on Statistics, World Bank-supported Living Standards Measurement Surveys (LSMS) as available and the ADMP PMU itself

16. A **Mid-Term Review** would be carried out towards the end of the Project's third year. The Review would cover, among other things: (i) physical and financial progress as measured against Project AWPBs; (ii) performance and financial management of PFIs and non-financial implementing partners such as universities and R&D institutes; and (iii) an assessment of the efficacy of technical assistance, training programmes and Project-supported rural finance and of their delivery of Project benefits to the Project's target groups of *dehkan* and small private farmers, leading entities, input suppliers and services providers and the rural unemployed/underemployed. In addition, it is expected that the Review would look at institutional and policy changes arising from Project's activities, with regard to: the progress of capacity development interventions in support of the value chain stakeholders; the provision of rural finance; the socio-economic status of less advantaged rural women and men; and environmental impact. Review findings on implementation progress and any institutional and policy change would inform decision-making, as appropriate, on adjustments to the content, financing and targeting of the Project's components. The findings and recommendations of the MTR would feed into any subsequent scaling up analysis, in particular with reference to the extension of the Project to expand the interventions through a second PBAS allocation.

17. The Project Manager, under the supervision of the RRA Director, will be responsible for the preparation of six-monthly and annual progress reports for submission to the Inter-agency Council, and IFAD within a month from the end of the reporting period.

18. Data sources for the annual performance reports will include: Project baseline survey; semester physical and financial progress reports for each component; PFI records and Project-related reports including VCDPs and business plans; qualitative interviews and case studies with small-scale primary producers and market services providers, lead enterprises and new employees; and reports on challenges and Project facilitation strategies for their respective component implementation responsibilities prepared by the thematic experts, staff and consultants, hired within the PMU (including the PMU's Chief Accountant, Procurement Specialist, Gender/ Youth Specialist) as well as the PIT (including the three Regional Coordinators/Value Chain Specialists, the Rural Finance Officer, the Irrigation Engineer and the M&E Specialist.

19. The implementing agencies will - within 2 weeks from the end of the reporting period - submit six-monthly progress reports to the PMU as a condition for release of funds for the ensuing period.

20. **Annual Progress Reports** have two primary objectives: (a) to record the progress of implementation, for the period under review, compared against the targets and objectives set out in the loan documents and the AWPB; and (b) to confirm the degree to which the Borrower is in compliance with the conditions of the Financing Agreement.

21. **Annual work plan and budget.** The AWPB details, the expected results of the Project at the level of output indicators (e.g., the number of people expected to participate in Project-sponsored training initiatives, number of farmers adopting innovative technologies, etc.). It is both the main information source for Project results and a principal tool for orienting and coordinating the actions of the diverse institutions and stakeholders responsible to deliver products and services to the target



beneficiaries. Its annual content is informed by the outputs from the business plans implementation, the results from the evaluation of the prior year's implementation, and the Project's overall goals and expected outcomes and impacts.

22. **Project Completion Report / Impact Assessment.** During the final year of project implementation, as part of the preparation of the IFAD-required Project Completion Report / Impact Assessment (PCR/IA), 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. The Project completion process will include stakeholder workshop(s) to give Project stakeholders the opportunity to: (i) evaluate the performance of the Project; (ii) to promote accountability; and (iii) to identify factors and responsibilities to increase the likelihood of sustainability, together with key success factors and shortcomings.

23. In addition to the M&E arrangements described above, external monitoring will comprise: **IFAD supervision**, including operational reviews of the Project, covering a random sample of activities; external audit, carried on a yearly basis by independent auditors and under Terms of Reference acceptable to IFAD; risk-based financial management supervisions (see Summary of Risk Assessment in Appendix 7 for further details); ad hoc thematic/diagnostic studies; and a self-assessment Project Completion Evaluation conducted by the RRA/ADMP PMU in cooperation with IFAD.

### C. Learning and Knowledge management

24. The Project's knowledge management programme will be an essential element for delivery of Project objectives, especially for dairy value chain related-learning. Two approaches will be taken: (i) a knowledge management programme within the Project for purposes of supporting within and between Project learning and (ii) support for a broader programme of knowledge management aimed at informing government decision-makers and influencing policy.

25. The "within project" knowledge management activities will include a PMU programme of (i) technology testing and demonstration; (ii) exchange visits to regional countries (iii) integration of Project learning into capacity building activities for the target groups; (iv) sharing of success stories through mass media and with IFAD; (v) "information corners" in *mahallas*; (vi) training of Project staff in communication skills and; (vii) maintenance of online information services.

26. The data management system will ensure that all reporting is completed and that information, reports and data are available in suitably accessible formats. Evidence based learning is an important output and the knowledge management system, combined with the evaluations must generate these evidence backed lessons. Lessons may be about approaches that both do and don't work. In order to manage the knowledge and information of the Project, the following activities will be conducted:

27. Documenting lessons learnt, best practices and cases of success: The PMU M&E Specialist will collect all available relevant information to document lessons learnt, best practices and cases of success. It could be based on information collected from: progress reports, meetings and interviews, monitoring and evaluation reports, outputs evidence provided by targeted groups, market and value chain entities and other involved parties.

28. The Project would prepare **publications and video material** to complement trainings and to document lessons learned for wider dissemination. These would comprise practical "user's manuals" for the intensification of the agricultural production on best practices, inputs, prices, expected yields etc. on the identified activity types. A thorough due diligence would be done to identify whether existing materials can be used for this purpose, and whether permission can be obtained for further dissemination. The publications would be made available both in 'hard' and electronic formats among Project stakeholders. The PMU M&E staff would set up and maintain a GIS in which data is inputted to illustrate Project interventions.

29. **Development of material for dissemination:** The PMU M&E Specialist, with the support of PMU and PIT technical staff and national and international consultants will produce communication materials summarizing some of the success stories to be distributed through networks, and through policy dialogue. Based on analysis of the documented information, and the reports, material for dissemination will be produced at the end of the Project; a mid-term Lessons Learnt Report might also be developed. A short film about the Project combining before and after footage will be shared with target groups, policy makers and other stakeholders. Recommendations and actions for value chain development will be developed.

30. Developing and delivering a lessons learnt study: based on the information collected along Project implementation, the M&E Specialist will develop an **end of Project Lessons Learnt Report**, analysing the documented lessons learnt, best practices and cases. It will be first submitted to IFAD, and once feedback has been incorporated, if any, the report will be shared widely.

31. Finally, during implementation, the Project would support efforts to broaden information dissemination through systematic development of farmer networks (to share knowledge on successful adaptation); farmer-to-farmer extension approaches (to facilitate technology transfer); development of private technical services (e.g., private veterinarians); and; strengthening functional linkages between universities and R&D institutions and farmer networks to ensure the relevance of the technology innovation agendas. The Project will be encouraged to produce videos for each extension event for further dissemination.

## Appendix 7: Financial management and disbursement arrangements

### A. Financial management assessment (FMA) of the Project

1. **Methodology.** In accordance with IFAD guidelines, a Financial Management Assessment (FMA) has been undertaken as part of Project design. The objective of FMA is to provide assurances that the Project will be implemented in an environment with sufficiently strong financial management systems and controls in place to properly manage, control and report on programme finances. The FMA involves assessing: (i) the inherent risk at country level; and (ii) the Project specific risk.

2. **Country context and inherent risk.** The country risk is rated as High risk. Transparency International's Corruption Perception Index ranked Uzbekistan 156 of 176 countries in 2016 (153 of 168 in 2015), with a score of 21/100 in 2016 (19/100 in 2015). In addition, information on the public financial management systems is not readily available. The latest Public Expenditure Financial Accountability Assessment (PEFA) assessment is dated 2013 but it has not been made public. Other donor diagnostic reports suggest that country PFM systems may not yet be ready for use in donors' projects. Some extracts from a World Bank diagnostic report (Country Integrated Fiduciary Assessment Report, 2011) include:

- a. While there has been some limited progress on improving the procurement activities of government, more still needs to be done. The procurement system remains well behind the PFM system in progress towards modernization and to meet international best practices.
- b. Uzbekistan's budget proposals and final budget reports are not sufficiently transparent to the wider public. Nor are the reports of the Chamber of Accounts on the budget documents, and on its annual audit activities, findings and recommendations. Transparency creates trust, promotes more public involvement and commitment and benefits the economic development of the country. Access to economic and financial information and related data remains a big challenge, and additional opportunities for more transparent reporting are, therefore, identified.
- c. The external audit function is carried out by the Chamber of Accounts (COA). It is at the point of transition to standards-based external auditing that is compliant with the International Organization of Supreme Audit Institutions (INTOSAI) standards. The COA may not have capacity to audit donor-financed projects at this time.
- d. The accounting practiced by the different levels of government varies considerably. There is limited knowledge of internationally recognized accounting standards, such as International Financing Reporting Standard (IFRS), International Public Sector Accounting Standards (IPSAS)
- e. There are no internal audit units in the Ministries. Instead, the Accounting Chamber and the Revision Commission of the MOF perform the role of internal audit. International standards for internal audit are not applied by both units.

3. In order to mitigate the inherent risk, a standalone PMU will be established under the RRA with separate FM arrangements. This arrangement is already in place for the ongoing IFAD projects and some WB and ADB projects, and it has been assessed largely as satisfactory.

4. **Anticorruption and Good Governance Framework.** In accordance with its Policy on Preventing Fraud and Corruption in its Activities and Operations (Anticorruption Policy), adopted by the Executive Board in December 2005, IFAD applies a zero-tolerance policy towards fraudulent, corrupt, collusive or **coercive** practices 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, if allegations are substantiated, appropriate sanctions will be applied on the parties or entities involved. Among the remedies available to IFAD under the General Conditions for Agricultural Development Financing, are the suspension and cancellation of a loan and/or grant. IFAD may

suspend, in whole or in part, the right of the Borrower/Recipient to request withdrawals of funds after giving notice to the Borrower/Recipient that credible allegations of coercive, collusive, corrupt or fraudulent practices in connection with the Project have come to the attention of IFAD, and the Borrower/Recipient has failed to take timely and appropriate action to address the matters to the satisfaction of IFAD. IFAD may cancel, in whole or in part, the remaining amounts in the Loan and/or Grant Accounts, after consultation with the Borrower/Recipient, if IFAD thereafter determines that coercive, collusive, corrupt or fraudulent practices were engaged in by representatives of the Borrower/Recipient or any Project Party, and no timely and appropriate action was taken to remedy the situation. All payments made relating to any coercive, collusive, corrupt or fraudulent practice by any representative of the Borrower/Recipient or any Project Party, shall be considered ineligible for IFAD financing and shall be refunded to IFAD.

5. Under the General Conditions for Agricultural Development Financing, by notice to the Borrower/Recipient, the Fund may require that all bidding documents and contracts for procurement of goods, works and services financed by the Financing include provisions requiring bidders, suppliers, contractors, sub-contractors and consultants to: (i) allow full inspection by the Fund of all bid documentation and related records; (ii) maintain all documents and records related to the bid or contract for three years after completion of the bid or contract; and (iii) cooperate with agents or representatives of the Fund carrying out an audit or investigation.

6. IFAD takes all possible actions to protect from reprisals individuals who, in good faith, report coercive, collusive, corrupt or fraudulent practices in its project or grant activities. The primary responsibility for enforcing the Anticorruption Policy lies with the Borrower, and the first defence for controls shall be exercised by Project staff, Implementing Partners and Counterparts. Pursuant to this, the Borrower shall have the responsibility to incorporate pertinent provisions of the Anticorruption Policy in its contracts with project staff, cooperating/implementing partners, suppliers/consultants or any other third party entities. Given IFAD's zero tolerance described in the above paragraph, it is important that the project staff and all stakeholders of the project are familiar with IFAD's Anticorruption Policy as well as the national anticorruption policies and whistle blowing procedures.

7. **Financing profile.** The total cost of the ADMP is estimated to be US\$ 157.0 million and will be financed by: i) an IFAD loan (US\$ 92.7 million), ii) an IFAD grant (US\$ 0.8 million), iii) PFIs contribution (of US\$ 19.6 million) as part of the credit line (parallel financing); iv) beneficiaries contribution (of US\$ 19.5 million); and v) government contribution (US\$ 24.5 million) to cover taxes and duties. A detailed breakdown of the total cost by component is presented in Appendix 9. The IFAD loan of US\$ 92.7 million is expected to be financed over two IFAD PBAS cycles as follows: US\$ 46.2 million will be provided from the 2015-2018 PBAS cycle while the remaining US\$ 47 million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation.

8. **Lending terms.** The IFAD loan is expected to be granted on blend terms and shall be subject to interest on the principal amount outstanding at a fixed rate of 1.25 per cent and shall have a maturity period of twenty five (25) years, including a grace period of five (5) years, and in addition a service charge of 0.75 per cent, starting from the date of approval by the Executive Board.

9. **Denomination currency of the IFAD financing.** It is expected that the GOU will request to have the IFAD financing denominated in US\$ instead of SDR. In this regard, IFAD will aim to secure the funding in US\$ and inform GOU accordingly.

10. **Taxation.** The GOU will cover all taxes under the Project. Consequently, IFAD funds cannot be used to pay VAT, duties or other taxes imposed on the Project. However, as per IFAD procedures, taxes paid by the ultimate recipient of an expenditure (e.g. income taxes paid by a project employee or withholding taxes on the profits of a contractor) are not considered to be taxes paid by the Project.

## B. Project Risks Control

11. **Project specific Financial Management Assessment.** As required by IFAD Financial Management assessment guidelines, the summarised scoring at design is as shown in the table below.

**Table 1: Summary of FM Risks and mitigating measures**

Type of risk	Initial Risk Assessment	Proposed mitigation	Final Risk Assessment
<b>Inherent Risk</b>			
a) TI CPI : 21			
b) Public Financial Management systems require further improvements.			
Entity and project design			
<ul style="list-style-type: none"> <li>RRA FM capacity.</li> <li>Capacity of PFIs to accurately record, report use of funds by sub-borrowers.</li> </ul>	High		High
<ul style="list-style-type: none"> <li>Geographical spread of Project area.</li> </ul>			
<b>Control Risks</b>			
<b>Organisation and staffing</b>			
<ul style="list-style-type: none"> <li>RRA and its finance staff have previous experience in IFAD projects and procedures. The performance has been deemed satisfactory.</li> </ul>		<ul style="list-style-type: none"> <li>Govt. Resolution appointing the RRA to manage the Project through a standalone PMU. This will be a disbursement condition.</li> <li>A qualified project accountant to be appointed subject to IFAD no objection. This will be a disbursement condition.</li> </ul>	
<ul style="list-style-type: none"> <li>Institutional and organizational aspects due to the number of beneficiaries may result in the monitoring of activities on field, coordination problems, flow of information bottlenecks and reporting delays.</li> </ul>	M	<ul style="list-style-type: none"> <li>All FM staff to receive training in IFAD FM procedures, policies and systems including IFAD anticorruption policy and whistleblowing mechanism.</li> </ul>	M
<b>Budgeting</b>			
<ul style="list-style-type: none"> <li>Budget approval, budget format, submission timelines and budget controls not fully established.</li> <li>Availability of PFIs contribution</li> </ul>	M	<ul style="list-style-type: none"> <li>The consolidated AWPB to be submitted for IFAD no objection 2 months before the beginning of the fiscal year.</li> <li>Proper budget controls to be ensured in the accounting software to enable generation of reports on actual vs budgeted expenditures.</li> <li>Close monitoring of PFIs by the PMU.</li> </ul>	M
<b>Funds flow and disbursement arrangements</b>			
<ul style="list-style-type: none"> <li>Complex and possibly cumbersome flow of funds including transfers to and reflows from PFIs and to Rural Guarantee Facility. As well as from PFIs to beneficiaries.</li> <li>The capacity of PFIs to manage credit line and beneficiaries sub-projects may be weak in some instances.</li> <li>Modalities of the Rural Guarantee Facility are not formalized.</li> </ul>	H	<ul style="list-style-type: none"> <li>Two US\$ Designated Accounts will be opened for the Project in a commercial bank and will be managed by the PMU.</li> <li>The PMU will open and manage two separate operating bank accounts, in UZS, in a commercial bank acceptable to IFAD.</li> <li>AWPB including counterpart financing approved by the MAWR and by the MOF.</li> <li>PFIs submit to the PMU SOEs on quarterly basis and copies of the bank transfers to the beneficiaries' suppliers.</li> <li>Modalities regarding the Rural Guarantee Facility to be formalized.</li> </ul>	M
<b>Internal controls</b>			
<ul style="list-style-type: none"> <li>The internal control system in place within the RRA conforms to the Government system and has been deemed acceptable by IFAD. However the controls regarding the credit line and</li> </ul>	H	<ul style="list-style-type: none"> <li>A comprehensive financial procedures manual, is to be formulated as part of the start-up phase. The manual should include separate sections on the credit lines and the Rural Guarantee Facility.</li> <li>Due diligence of PFIs is requested before signing the agreement with them.</li> </ul>	M

Type of risk	Initial Risk Assessment	Proposed mitigation	Final Risk Assessment
<p>guarantee fund need to be strengthened.</p> <ul style="list-style-type: none"> <li>Validation procedures of the beneficiaries generated sub-projects.</li> </ul>		➤	
<p><b>Accounting systems, policies and procedures</b></p> <ul style="list-style-type: none"> <li>The accounting system is not able to generate project financial statements as needed by IFAD.</li> <li>WA forms generated and some financial reports generated manually.</li> <li>Expenditures and commitments are not linked to financing sources, by component, sub-component and category.</li> </ul>	M	<ul style="list-style-type: none"> <li>IPSAS cash accounting standards to be followed.</li> <li>Reconfigure the accounting system to: a) include a new project and to include allocation of expenditures to various components, sub-components, categories and financing sources, the commitments by financing sources, by component, sub-component and by category and b) generate automatically all financial reports and WA forms to be generated automatically by the system.</li> </ul>	L
<p><b>Reporting and monitoring</b></p> <ul style="list-style-type: none"> <li>The accounting system is unable to generate automatically financial reports per IFAD requirements. These operations are conducted manually, outside the accounting system using Excel, making them vulnerable to errors and inaccuracies</li> <li>Financial report formats required from the implementing partners need to be developed.</li> </ul>	H	<ul style="list-style-type: none"> <li>Reporting templates to be established and the Accounting system to be customized to produce these reports automatically.</li> <li>The PMU to produce quarterly Interim Financial Statements and annual financial statements.</li> </ul>	M
<p><b>Internal Audit</b></p> <ul style="list-style-type: none"> <li>There is no internal audit Unit at PMU/RRA level. However, the Project is subject to internal review by the Accounting Chamber and by the Revision Commission of the MOF.</li> </ul>	H	<ul style="list-style-type: none"> <li>Hire an internal auditor to conduct internal audit reviews of operational controls, in particular over sub-projects activities and also field visits.</li> <li>Internal Audit plan and report formats to be developed.</li> </ul>	M
<p><b>External audit</b></p> <ul style="list-style-type: none"> <li>No annual audit function in place.</li> </ul>	H	<ul style="list-style-type: none"> <li>Private auditors to be selected according to IFAD procedures to conduct annual audits according to ISA.</li> <li>Auditor to be selected using LCS from an IFAD approved shortlist with 70% qualifying mark on quality or through QCBS.</li> <li>IFAD no objection required for the Audit TORs. The external auditor will check on sample basis if the procedures are respected. The TORs for Project external auditor should be expanded to include field visits.</li> </ul>	L
<p><b>Fiduciary risk at design stage</b></p>	H	Mitigation actions listed above.	M

NB: H/M/L = High, medium and low risk as per the Guideline Note on undertaking Financial Management Assessment at design.

12. **Final risk rating.** The initial risk rating is considered to be High. The final risk rating is expected to become medium after implementation of the mitigation actions during the first year of implementation.

### C. Proposed financial management arrangements

13. **Organization and staffing.** The MAWR will have the overall responsibility for management of the Project on behalf of the Government of Uzbekistan. The RRA, which is an autonomous entity under the MAWR and has been legally established for donor programmes through a Resolution by the Government, will expand its scope and be responsible for overall management, coordination, oversight, monitoring, supervision, procurement and financial management, knowledge management and evaluation of the ADMP, through a PMU. This resolution granted a delegation of authority to the RRA for managing the HSP project (Govt. Resolution issued Jan. 2014) and for managing DVCDP (Govt. Resolution issued Feb 2017) and will need to be amendment to include the new project. For field Project activities, the Project will set up a regional Project Implementation Team (PIT) in one of the regions (TBI by the GOU) and with two Regional Coordinators operating in the other two regions. However, all financial functions will be managed from the PMU located in the capital.

14. The RRA has a financial unit which is responsible for financial management of the of the two ongoing IFAD projects and has as result obtained adequate knowledge of IFAD FM procedures and requirements. The unit is adequately structured and staffed with a chief accountant and an FM specialist assigned for the two ongoing IFAD projects. Past supervision missions have not noted any significant issues, the quality of the FM have been rated satisfactory and unqualified audit reports have been submitted in a timely fashion. For the new project, the PMU will hire on a competitive basis a qualified financial manager with a degree in accounting as well as experience in project accounting and financial management. As part of the Project start up the FM staff will be trained in IFAD FM procedures and systems.

15. **Budgeting.** The IFAD Loan/Grant is viewed by the Government as part of the national budget. However, for Project management purposes and in accordance with IFAD procedures all Project activities will be included in a Project Annual Work Plan and Budget (AWPB). At the end of each year key staff of the PMU/RRA will prepare the AWPB for the following year and will first submit it to the Inter-agency Council for examination and approval before sending it to IFAD for its no objection at least two months before the beginning of the relevant fiscal year. The AWPB is then submitted to the MAWR and the MOF for its final approval by December 31 each year. To be deemed eligible for IFAD financing all expenditures need to be included in the AWPB. The AWPB must disclose all expenditures, by component as well as by category and also to which degree these will be financed from each financing source. The AWPB must also include a procurement plan. The AWPB and its revisions will be promptly recorded in the Project accounting software to allow for proper budget controls and generation of variance reports.

16. **Accounting systems, policies and procedures.** As per current practice, the PMU will maintain its accounting records in accordance with IPSAS-cash basis of accounting. All project transactions, will be recorded in an accounting software 1- C currently in place in the RRA financial unit and used for all donor financed projects managed by RRA (e.g. WB, ADB and IFAD). However, as many reports and WA forms are currently produced manually by the finance unit, it is very important the software is reconfigured as part of the project start-up to include the new project, keep it separately from other projects as well as to generate all required financial reports and WA forms automatically. In particular the following actions will need to be completed as part of the start up:

- All accounting policies and procedures, related to the Project will be clearly documented in the financial management manual (part of the PIM).
- The system must link every expenditure to a budget line, component/subcomponent/activity, expenditure category, and financing source.
- The chart of account must be developed based on the design cost tables, flow of funds chart and accounts structure and the Financing Agreement.

- The system must also be able record approved budgets and budget revisions, monitor commitments as well as include a fixed assets module.
  - Government contribution covering taxation, PFIs and beneficiaries contributions will be recorded separately in the accounting system. Tax exemptions to reflect counterpart contributions will also be recorded in the accounting system based on exemption certificates issued under each contract.
17. **Internal Controls.** The internal control system in place within the RRA financial unit follow the government procedures and has been deemed adequate:
- It guarantees a sufficient level of segregation of duties and authorization with regards to transactions, through several levels of independent controls including: a) formal organizational structure, which clearly separates specific functions from independent control mechanisms, b) all payment orders for project expenditures are authorized by the chief accountant and the Director General of RRA,
  - All payments from project bank accounts are subject to a high level of several controls. No cash payments are allowed,
  - The on-going project (DVCDP) has a comprehensive project implementation manual, including financial management manual, in place,
  - The WA forms are prepared the chief accountant and signed by the project director while the RRA director general and deputy director general are the authorized signatories for the Withdrawal applications.
  - Transactions are reviewed by the Accounting Chamber, and by the Revision Commission of the MOF.
18. In order to improve further improve the internal controls, the following actions will be important:
- The DVCDP financial management manual will need to be updated to meet the new Project's needs before implementation begins.
  - Training of all staff on IFAD financial management and fiduciary controls.
  - An internal auditor to be contracted to focus specifically on PFIs and their subprojects through field visits.
  - All Project sites are clearly identified and mapped including GPS-coordinates (as appropriate) to facilitate supervision and that this information is shared with other donors supervising projects in the same sector;
  - All trainings will be duly documented including a list of participators;
  - All distributed goods, agricultural inputs etc., reconciled against procured goods and supported by distribution lists of sufficient detail; and
  - All implementing partners including PFIs FM-capacity will be properly assessed before the awarding of the contract and their financial performance will be continuously assessed.
19. **Records management.** The PMU/RRA will maintain adequate filing and ensure proper back up of all project records. In accordance with IFAD General Conditions, the borrower has to maintain the original records for a minimum of 10 years after the Project completion.
20. **Financial reporting.** The PMU will prepare and submit to IFAD the following financial reports generated by the accounting software as follows:
- Quarterly consolidated interim financial reports (IFRs) as agreed with IFAD.
  - Annual consolidated Financial Statements within four months after the end of the fiscal year prepared in compliance with International Accounting Standards (IPSAS cash) and IFAD requirements.
21. The financial reports will in include at least the following information: (i) sources and uses of funds by financing source; (ii) incurred expenditures by component and financing source, (iii) actual



expenditures vs budgeted expenditures by financing source by component and category, (iv) designated account reconciliations, (v) Statement of Expenditures - Withdrawal Application Statement, (vi) a fixed asset register, credit and (vii) Rural finance reports disclosing a) the amount of credit financed from the IFAD loan, b) the amount of credit financed from the revolving account, c) the amount of reflows to the revolving accounts by PFI and d) reconciliation of the revolving accounts. Financial reports will include amounts contributed by beneficiaries and PFIs where applicable. In addition a separate report on Rural Guarantee Facility (RGF) will be furnished to the IFAD.

22. The PFIs will submit to the RRA quarterly progress reports in accordance with uniform reporting formats agreed by RRA and IFAD.

23. **Internal Audit.** There is no internal audit Unit at the PMU level. However, the projects are subject to internal review by the Accounting Chamber and by the Revision Commission of the MOF. In order to avoid the risk of over-auditing, during implementation and based on IFAD recommendations, the PMU may hire an internal auditor to review the operational controls for the three projects funded by IFAD (HSP, DVCDP, ADMP), in particular over rural finance components.

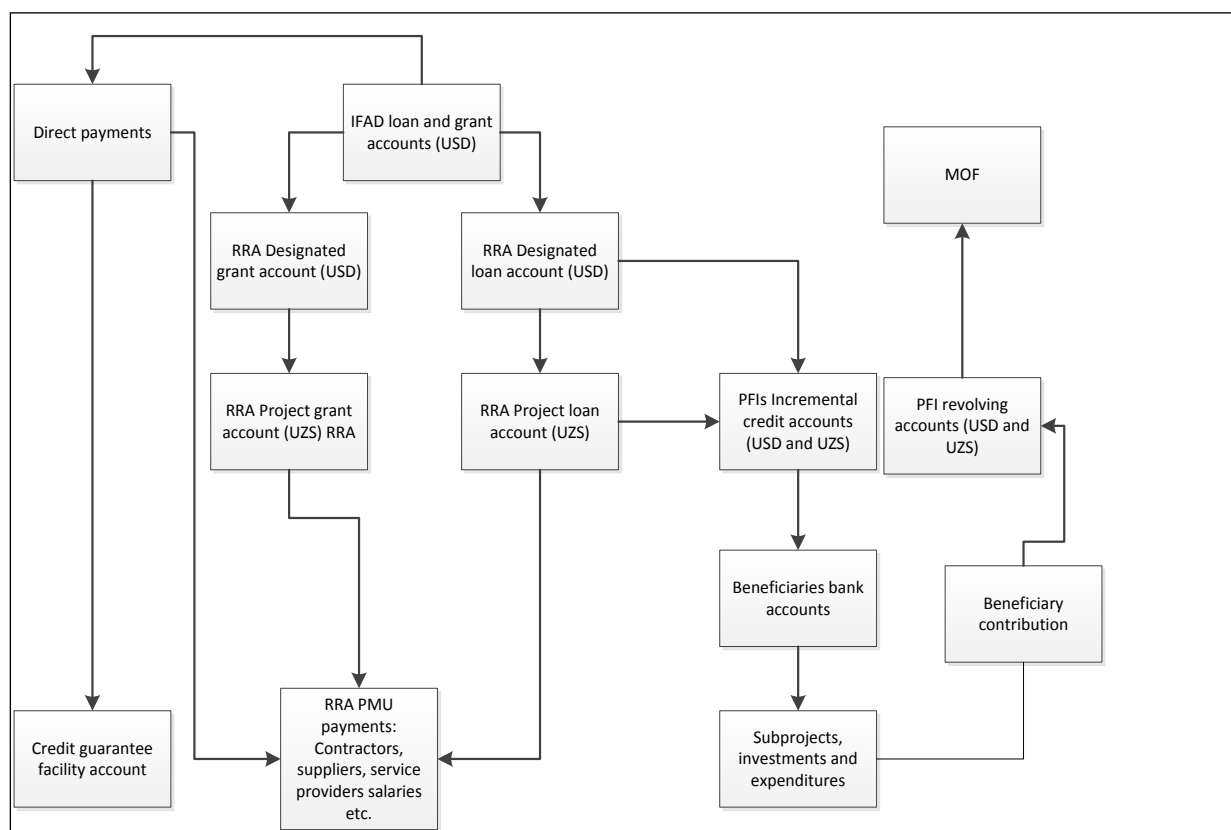
24. The main tasks assigned to internal auditor are: (i) prepare a yearly action plan of the entities that he will audit at center and regional level and submit this action plan for the approval of the RRA/PMU Director; (ii) review operational controls under the Inclusive Rural Finance Component, where PFIs will receive and allocate on-lend a large proportion of Project funds, to a large number of beneficiaries such as farmers, commercial farms, entrepreneurs; (iii) check on sample basis if eligibility criteria are respected; and (iv) ensure that the beneficiaries and the reported end-use of funds are incurred for intended purposes and in compliance with documented procedures, based on terms of reference to be agreed with IFAD and assure the good quality of goods and works of sub-projects by frequent field visits.

25. **External Audit.** The RRA/PMU will appoint an independent private audit firm, selected in accordance with the procedures and criteria set forth in IFAD's Guidelines on Project Audits (for Borrower's Use). The auditors will be procured using LCS from the World Bank approved shortlist with a 70% qualifying mark on quality or through QCBS. The auditors will be required to audit the consolidated financial statements of the entire Project for each fiscal year in accordance with International Standards on Auditing (ISA). The terms of reference for the audit will be agreed with IFAD on an annual basis. The auditor will be required to issue a separate opinion on (i) the project financial statements, (ii) SOE-WA statement including the adequacy of supporting documentation, (iii) operation of the designated account, (iv) funds used by the implementing partners; and (v) compliance with procurement. As part of the annual audit the auditors are required to audit the Project transfers and expenditures incurred under RGF. In this respect the investing entity and/or RGF, shall make available to the Project auditors all necessary financial information related to the use of Project funds including financial reports, bank account information, supporting documentation for each transaction. The auditors will also prepare a Management Letter giving observations and comments on the internal control systems of the PMU/RRA and providing recommendations for improvements in accounting, records management, systems, controls, compliance with financial covenants in the Financing Agreement and compliance with previous year's auditors' recommendations. The audit report, including the management letter covering the audit observations on internal controls, will be submitted to IFAD within six months of the end of the fiscal year. The appointment of the auditor shall be for a maximum period of 3 years, subject to satisfactory performance.

26. In addition to the annual audit of the project financial statements, the following arrangements will be followed:

- All PFI and RGF will submit annual audit reports to the PMU to be reviewed by the credit officers.
- An operational audit of RGF will be conducted after 3 years of operation by the RRA PMU staff as well as identified external credit guarantee specialists as required.

27. **Flow of funds.** Two separate Designated Accounts denominated in US\$ will be opened for the IFAD loan and the IFAD grant in a commercial bank acceptable to IFAD and will not be mingled with other funds. From the designated loan/grant account the funds will flow to the Project loan/grant account denominated in UZS to finance eligible expenditures under the Project. From the designated loan account and the Project loan account, funds (US\$ or UZS) will also be transferred to incremental credit accounts (one account in US\$ and one in UZS) maintained by PFIs in the form of credit to finance sub-projects undertaken by the beneficiaries. The beneficiaries repay the received credit to two revolving accounts maintained by each PFI, one in UZS and one is US\$. Each PFI pay interest to the MOF and will repay the received incremental credit within 20 years to the MOF. A flow of funds chart is presented below. The funds for RGF are expected to be transferred directly from IFAD to an account designated by the Borrower.



#### D. Disbursement arrangements

28. **Overview.** The IFAD financing shall be disbursed against duly certified withdrawal applications in accordance with the IFAD disbursement procedures.

29. **IFAD disbursement procedures.** In accordance with the IFAD disbursement procedures between the date of entry into force of the Financing Agreement and the Financing Closing Date, the PMU may request withdrawals from the Loan Account and/or Grant Account of amounts paid or to be paid for eligible expenditures. Accordingly, three standard disbursement procedures may be used for withdrawal of financing:

- Advance withdrawal;
- Direct payment;
- Reimbursement.

30. **Authorized allocation of the Designated account.** The Designated Accounts for the IFAD financing will be operated and replenished following the Imprest Account arrangements. After the IFAD financing has entered into force and the conditions for first disbursement have been duly

complied with and upon request by the borrower, IFAD will make an initial deposit to the Designated Accounts equal to the requirements of six months implementation (Authorized Allocation). The authorized allocation will be outlined in the Letter to the Borrower and is expected to be as follows:

- US\$ 3 million under the IFAD loan;
- US\$ 300 000 under the IFAD grant.

31. **Start-up Funds.** The Project is estimated to receive US\$ 200,000 from the loan to incur expenditures related to the Project start up before the satisfaction of the conditions precedent to withdrawal, The start-up funds will be used to for: (i) Recruitment of key staff, (ii) finalizing the Project Implementation Manual including the Financial procedures, accounting and procurement manual, (iii) Preparation of the first AWPB & procurement plan, (iv) organization of a Start-up workshop, (v) Configure the accounting software to include the new project, and (vi) finalization of the Agreement/MOUs templates with the implementing partners, PFIs and RGF.

32. **General Conditions for first withdrawal.** The following conditions related to financial management are to be met before the first withdrawal can be realized:

- Govt. Resolution appointing the RRA to manage the Project.
- Key Staff including the PMU coordinator, the chief accountant, and the procurement specialist have been duly appointed;
- A Project Implementation Manual including the Financial Administration and Accounting manual, has been approved by IFAD; and
- The IFAD no-objection on the first AWPB and procurement plan for the first 18 months of the Project has been obtained.
- IFAD has received from the Minister of Finance, – a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s);
- IFAD has received documentation evidencing the opening of (i) designated accounts to receive IFAD Loan and grant proceeds; and (ii) the operating accounts to receive funds from the designated account with advice of the persons/titles authorized to operate these accounts.

33. In addition to the general conditions for first withdrawal listed above, the following specific conditions for first withdrawal will apply. No funds will be transferred to the PFIs before the following conditions have been fulfilled:

- First three Value Chain Development Plans have been prepared and received IFAD's no-objection.
- The Investment Guidelines (or equivalent) for credit including the operating modalities including the eligibility criteria for the PFI and beneficiaries by credit window (agricultural diversification and modernization window or youth window) have been approved by IFAD.
- The Subsidiary Loan agreement (SLA) for providing credit to PFI has been approved by IFAD.
- The PFI has opened an incremental account to receive IFAD loan funds and a revolving account for credit reflows.

34. No funds will be transferred to RGF before the following conditions have been fulfilled:

- RGF has become fully operational and due diligence assessment including an assessment of its FM capacity has been conducted and has been deemed satisfactory to IFAD.
- The investment guidelines (or equivalent) and operating modalities including the eligibility criteria for RGF have received IFAD's no-objection.
- The RGF agreement, specifying all the necessary modalities, between RRA (or other entity as agreed with IFAD) and the entity managing RGF has been duly formalized and received IFAD's no objection.
- A separate account for RGF has been duly opened.
- The template for RGF sub-agreement for providing guarantees to financial institution/smallholder/rural business have received IFAD's no-objection.

35. **Withdrawal applications.** The PMU will compile and consolidate, on a timely basis, eligible Project expenditures for activities. From these expenditures the PMU will prepare withdrawal applications (WAs) for eligible Project expenditures for submission to IFAD for reimbursement or replenishment. All WAs will be signed by the authorized signatories.

36. **Minimum withdrawal amounts.** In order to minimize transaction costs, the minimum withdrawal amounts are set as follows:

- Withdrawal Applications requesting replenishments of the Designated Account should at least cover a minimum amount of thirty per cent (30%) of the initial advance.
- Direct Payment method should only be used for payments of US\$ 100,000 and above while expenditures below US\$ 100,000 should be financed from the Designated Account if possible and claimed through the replenishment of the Designated Account.

37. **Statement of Expenditure (SOE).** The SOE thresholds shall be determined in the light of the associated risk for each expenditure category and will be duly documented in the Letter to the Borrower. The initial estimate is that the SOE threshold will be US\$ 100,000 for all expenditures under all categories. The Project will retain the relevant support documents and make them readily available for inspection and review by supervision missions and the auditors. These thresholds may be revised from time to time based on Project performance and risk assessment.

## **E. FM Supervision and Implementation support**

38. **FM supervision strategy.** The IFAD supervision strategy for this Project will include quarterly monitoring of the financial progress through quarterly financial reports and internal and external audit reports received. In addition an FM specialist will take part in annual supervision missions.

39. **Supervision and implementation support plan.** In light of the risk assessment residual (medium FM risk), in the first two years of implementation the supervision plan of project will especially focus on the following actions:

- Detailed review of adequacy of the staffing arrangements at the FM unit of the PMU, including the TOR's and performance of the financial staff and identification of training needs;
- Detailed review of the accounting software and financial reports produced by the accounting software and the use of budget controls;
- Review of overall flow of funds (and resolving any bottlenecks) and a detailed review of the operation of the designated and Project accounts (including monthly reconciliations).
- Detailed review of the fixed asset register and verification of a) inventory reports and b) assets through spot checks;
- Detailed review of the use of the Statement of Expenditure (SOE) procedure and the adequacy of supporting documentation for all expenditure items incurred by the PMU and by the implementing partners;
- Detailed review of records management, filing and information back up;
- Follow-up on contracting the Project (independent) external auditors and the TORs; and
- Follow-up on work performed by the internal audit function.

40. The supervision process will be complemented by desk review of progress and financial reports, the Project's annual financial statements, internal audit reports, and annual audits.

### Implementation readiness – planned actions

Action	By Whom	When	Conditionality
Agree on the Start-up funds (if any)	IFAD and the Borrower	As part of design	Negotiations
Project Implementation Manual, Financial procedures manual, and procurement manual duly updated.	PMU/RRA	Start up	Disbursement condition
Opening of Designated Account, and operational account	Borrower/ PMU/RRA	Start up	Disbursement condition
Format of the Quarterly/semi-annual Financial Reports and Annual Financial Statements to be agreed.	IFAD & PMU/RRA	Start up	N/A
Finalise project draft LTB	IFAD	As part of design	Negotiations
Prepare first AWPB & procurement plan.	PMU/RRA	By start-up	Disbursement condition
Appointment of auditor under TORs and conditions acceptable to IFAD	PMU/RRA	Not later than 3 months after entry into force	Financing Agreement
Customize the accounting software	PMU/RRA	Start up	N/A
Agree on the scope of work and the TORs of the internal auditor as well as report format	PMU/RRA /IFAD	Start up	N/A
Finalize the credit/investment guidelines and the sub agreements for PFIs and the RGF Submission of first 3 VCDPs to IFAD for no objection	PMU/RRA	Start-up	Specific disbursement conditions

## **Annex 1: TERMS OF REFERENCE FOR THE AUDIT OF IFAD AND NON-IFAD FUNDED PROJECTS/PROJECTS**

### **Background**

In accordance with relevant loan/financing agreements between the GOU and IFAD, the audit of the Agriculture Diversification and Modernization Project (ADMP) has to be carried out by an independent Auditor. Loan and other relevant financing agreements, the Letter to the Borrower and Appraisal reports of the Project are the main reference documents for the Audit. In case of contradiction between the Project Financing Agreement and the National Laws, the provisions of the former prevail. The sources of funds subject to audit under this TORs are: (a) IFAD-Loan No.\_\_\_\_-UZ; (b) IFAD Grant No.\_\_\_\_-UZ; (c) respective GOU funds; and (d) beneficiaries contributions and Participating Financial Institution (PFI) financing.

The audit engagement will be for an initial period of 3 years, subject to annual satisfactory review conducted by the PMU in consultation with IFAD. The annual audit should be planned so as to ensure the receipt by the IFAD of the audited PFSs before June 30 of each year, that is, not later than 6 months after the fiscal year-end. For the first audit under this engagement, the reporting period should be from the date of entry into force of the Agreement to succeeding 30<sup>th</sup> June, unless otherwise agreed with IFAD.

### **Objective**

The objective of the audit of the Project Financial Statements (PFS) of the ADMP is to enable the auditor to express a professional opinion on the financial statements on the ADMP for each relevant reporting period, comprising funds received from various financing sources and expenditures incurred there from as reported in the PFS. The auditor will in addition express separate opinions on the withdrawal applications / statements of expenditure (SOE) used for withdrawal of funds from IFAD and the use of Designated Accounts (DAs). The financial reporting periods and relevant sources of funds subject of the audit are detailed below:

From (date, month year) to (date, month year) with respect to the ADMP including the following sources of funds: (a) IFAD- Loan No.\_\_\_\_-UZ, (b) IFAD Grant No.\_\_\_\_-UZ; (c) respective GOU funds; and (d) beneficiaries contributions and PFI co-financing.

The ADMP will prepare three (3) separate set of financial statements which will be submitted to the auditor for review and testing activities. Auditors will be required to issue three (3) separate sets of opinions covering PFS, SOEs procedure and Das.

The information, both financial and non-financial, which is subject to verification by the auditor, is all information which makes it possible to verify that the expenditures claimed by the Project Management Unit (PMU) in Financial Statements have occurred, are accurately recorded and eligible for financing under the Project Financing Agreement.

The Project's accounting system (books and records), and the ADMP's Financial Implementing Manual provide the basis for the preparation of the PFS, and have been maintained to ensure accurate recording of all financial transactions of the Project.

### **Scope**

The audit will be carried out in accordance with International Standards of Auditing, as published by the International Auditing and Assurance Standards Board of the International Federation of Accountants (IFAC), with special reference to ISA 800 (Auditor's Report on Special Purpose Audit Engagements) and to relevant IFAD guidelines. The audit will include such tests and reviews, as the auditor consider necessary under the circumstances. In conducting the audit, special attention should be paid to the following:

- a) All funds, including funds from the financing, counterpart funds, beneficiary contributions and co-financing from Participating Financial Institutions (PFIs), have been used in accordance

with the conditions stipulated in the financing agreements, with due attention to economy and efficiency, and solely for the purposes for which the financing was provided.

- b) Counterpart funds for the ADMP have been provided by GOU and used in accordance with national or organizational financial regulations, with due attention to economy and efficiency, and solely for the purposes for which they were provided.
- c) Goods, consultancy and other services, and civil works financed out of Project funds have been procured in accordance with the relevant loan/financing agreements, Letter to Recipient/Borrower and IFAD Procurement Guidelines.
- d) All necessary supporting documents, records, and accounts have been kept in respect of all Project ventures, including expenditures reported via SOEs or DAs or submitted to IFAD for direct payments. Clear linkages should exist between the books of account and reports presented to IFAD.
- e) Whether the PFS are drawn up in conformity with internationally accepted accounting standards (IFRS or IPSAS) and give a true and fair view of the financial status of the Project at the end of each of the above listed reporting period and of the resources and expenditures for the periods ended on these dates.
- f) The DAs have been used in accordance with the provisions of the relevant loan/financing agreements.
- g) The fixed asset register is maintained for all fixed assets procured under the Project.
- h) Funds advanced to (PFIs) for on-lending to beneficiaries (sub-loans or sub-grants) and Guarantee Fund have reached the intended beneficiaries, have been spent for intended purposes, are in compliance with relevant subsidiary loan agreements and the expenditures correctly accounted for.
- i) The accounting and overall internal control system to monitor expenditures and other financial transactions are adequate and effective and ensure safe custody of Project financed assets.

In conducting the audit, the auditor shall carry out a physical verification of any significant assets purchased and confirm their existence and use for project purposes.

The Auditor will test the financial transactions against documentary or other evidence necessary to satisfy the auditor as to the authenticity and correctness of the transactions, their complete and proper citing in the books of accounts, financial performance and status.

### ***Project Financial Statement***

The PFS will include the following:

- Yearly and cumulative statements of sources and application of funds, which should disclose separately, and with respect to the relevant financing agreements, IFADs funds, counterpart funds (Government), other donor funds and beneficiaries" funds;
- Balance sheet, which should disclose bank and cash balances (that should agree with the statement of sources and application of funds);
- Yearly and cumulative listing of withdrawal application authorized and submitted to IFAD, indicating values and category of expenditures;
- A summary of transactions and reconciliation of the /DAs with the financial statements;
- Cumulative status of funds by expenditure category; indicating total disbursement and expenditure in comparison to allocations authorized in the Financing Agreement; ‘
- A statement of comparison between actual expenditures and annual budgets;
- A summary of the accounting policies and other explanatory notes accompanying the Financial Statements; and
- Consolidated financial statements, where the Project consists of more than one entity. A summary of assets acquired or procured to date with Project funds by category.

- Reconciliation between the amounts shown as received by the Project and those shown as being disbursed under each relevant Loan and financing agreement by IFAD and/or other financiers (PFIs, Govt. of Uzbekistan and beneficiaries) should be attached as an annex to the PFS. As part of the reconciliation, the auditor will indicate the procedure used for the disbursement – SAs” funds, letters of credit, special commitments, reimbursement or direct payment – and indicate whether the expenditure is fully documented or uses the SOE format.

### **Statements of Expenditures**

In addition to the audit of PFS, the auditor is required to audit all Withdrawal Applications for direct payments and SOEs / other documents used as the basis for the submission of withdrawal applications. The auditor should apply such tests and controls, as the auditor considers relevant and necessary under the circumstances. SOE expenditures should be carefully reviewed to ascertain the eligibility under the relevant loan and financing agreements, donors” Letters to the Borrower and with reference to the Project’s appraisal report for guidance when necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, the auditor should separately note these. Annexed to the PFS should be a schedule listing individual SOE withdrawal applications by specific reference number and amount. The total withdrawals under the SOE procedure should be part of the overall reconciliation of IFAD and/or other financiers” disbursements described above.

The auditor should pay particular attention as to whether:

- a) the SOEs have been prepared in accordance with the provisions of the relevant loan/financing agreements;
- b) expenditures have been made wholly and necessarily for the realization of the Project’s objectives;
- c) information and explanation necessary for the purpose of the audit have been obtained;
- d) supporting records and documents necessary for the purpose of the audit are accurate, reliable and have been retained; and
- e) the SOEs can be relied upon to support the related withdrawal applications.

### **Designated Accounts**

In conjunction with the audit of the PFS, the auditor is also required to audit the activities of the DA associated with the projects, including the Authorized Allocation or Initial Deposit. The auditor must form an opinion as to the degree of compliance with IFAD procedures and the balance of the DA at year end. The audit should examine:

- a) Deposits and replenishments received from IFAD and/or other financiers;
- b) Payments substantiated by withdrawal applications;
- c) Interest that may accrue on the outstanding balances; and
- d) The year-end balances, transfer of funds to operational banks accounts in national currency and the use of correct exchange rates to convert local currency expenditures to USD.

All transactions in the DA should be fully accounted for and be compliant with the Financing agreement and Letter to Recipient/ Borrower (LTR). As part of the opinion on the PFS, the audit report will include an opinion on SOEs and DAs, indicating the extent to which these procedures can be relied upon as a basis for loan disbursements under the Project.

### **Audit Reports**

The auditors will issue the audit report and opinions on the ADMP Financial Statements, the DA and the SOEs, (refer to the “Project Financial Statements” paragraph above for a definition of the statements included therein), covering the period from (date, month year) to (date, month year) with



respect to the ADMP including the following sources of funds: (a) IFAD Loan No.\_\_\_\_\_-UZ; (b) IFAD Grant No.\_\_\_\_\_-UZ; (c) respective GOU funds; and (d) beneficiaries and PFI contributions.

In addition, the auditor will prepare a “management letter”, in which the auditor will:

- a) Give comments and observations on the accounting records, systems, procedures and internal controls that were examined during the course of the audit;
- b) Identify specific deficiencies and areas of weakness in systems and controls and make recommendations for improvement;
- c) Communicate any significant matters that have come to attention during the audit which might have a material impact on the implementation of the Project;
- d) Report on the lack of compliance of each financial covenant in the relevant loan/financing agreements;
- e) Bring to the Recipient’s attention any other matters that the auditors consider pertinent;
- f) A specific set of comments on activities under the Project’s Inclusive Rural Finance Component outcome, in relation to the accounting records, systems and controls that were examined during the course of the audit, achievement of the planned results of the Project; and
- g) Follow up on the remedial actions taken by the ADMP in response to previous audit findings and recommendations and report on the progress or otherwise.

The External Auditor should, apart from expressing an opinion on the financial condition of the Project, express an opinion on whether:

- a) The proceeds of respective financiers’ loan/grant have been utilized only for the Project in accordance with the respective Project Financing Agreement and the Project Implementation Manual;
- b) The financial information contains data as being necessary for inclusion on the Financial Statement;
- c) The financial information complies with relevant regulations and statutory requirements; and
- d) Procurement actions, which have not been subject to IFAD, and/or other financiers’ prior review, are in compliance with relevant financiers’ requirements.

The deadline for the submission of the audit report to the ADMP, including the management letter, is: No later than 30 June of each fiscal year (20\_\_\_).

The ADMP should then promptly forward copies of the audited project financial statements (including audit opinion) and the management letter to IFAD and other relevant financiers.

### **General**

The responsibility for the preparation of financial statements including adequate disclosure is that of the management of the ADMP. This includes the maintenance of adequate accounting records and internal controls, the selection and application of accounting policies, and the safeguarding of the assets of the entity. As part of the audit process, the auditor will request from management written confirmation concerning representations made to the auditor in connection with the audit.

The ADMP will co-operate fully with the auditor and will make available to the auditor whatever records, documentation and other information is requested by the auditor in connection with the audit. The auditor should be given access to all legal documents, correspondence, and any other information associated with the projects and deemed necessary by the auditor. Confirmation should also been obtained of amounts disbursed and outstanding at the Bank and of amounts disbursed under IFAD and other relevant financiers.

The IFAD Guidelines on Project Audits dated 12 December 2011 outline IFAD’s policy and procedures relating to the audit of IFAD-funded projects. The IFAD Guidelines on Project Audits are

an integral part of these Terms of References and are to be followed for the Audit of IFAD funded projects, projects and activities.

The auditor should understand that working papers under the ADMP can be subject to the review by authorized ADMP's financiers' staff, including IFAD.

The selected Auditors should prepare an engagement letter upon receiving the contract for this assignment, to help avoid misunderstandings about this assignment. It is in the interest of both the Auditors and the borrower that the Auditors send the engagement letter before the engagement commences. The form and content of the audit engagement letter may vary for each client, but it should generally include reference to the matters addressed in this document. In addition, it should state the management's responsibility for the preparation of the financial statements, the amount of audit fees, and the timetable for providing the audit reports.

## Appendix 8: Procurement

### A. Summary of procurement assessment

#### General

1. IFAD is signatory to the Paris Declaration aiming at increasing alignment of aid with partner countries' "priorities, systems and procedures and helping to strengthen their capacities". Therefore, as part of the design for the ADMP, IFAD assessed the public procurement systems and procuring institutions available in Uzbekistan for purposes of identifying an entity that would handle procurement under the ADMP.
2. References are made to the pre-existing World Bank's Country Procurement Assessment Report (CPAR) of 2003, an in-depth review of the capacities of the public procurement systems, the World Bank's Country Integrated Fiduciary Assessment (CIFA) of 2012, as well as the 2013 Public Expenditure Financial Accountability Assessment (PEFA), which includes an updated assessment of the public procurement system. Such reports form an adequate basis for purposes of assessing compliance of country systems with IFAD's procurement guidelines.
3. While the government has introduced various public procurement reforms through various decrees and resolutions, serious challenges remain. As identified in the CPAR, confirmed in the CIFA and PEFA assessment found the following weaknesses in Uzbekistan's public procurement system: (a) no unified legislative framework; (b) inefficient and non-transparent procurement practices; (c) no single institution with oversight or regulatory authority for public procurement practices; (d) weak capacity for review of bidder's complaints; (e) complicated internal review/approval of bid evaluation reports leading to low accountability and delays; (f) no comprehensive anti-corruption measures; and (g) low skills/capacity of staff handling public procurement at every level. Further, also noted recently the difficulty in obtaining a bank guarantee for bid security and performance security by the bidders and non-availability of alternative instruments for such purpose in the country's banking system in particular Joint Ventures. Therefore, despite some recent developments to modernize and strengthen the Uzbekistan's public procurement system there are critical gaps in compatibility with IFAD's applicable Procurement Guidelines and procedures. However, the capacity of the RRA to conduct procurement was found to be in compliance with IFAD procurement regulations and procedures.
4. The efficiency of project implementation is impeded by cumbersome local procedures that require clearance from an Inter-Ministerial Bidding Commission (IMBC) at each stage of procurement (consisting 11 ministers headed by a Deputy Prime Minister) for procurements valued more than \$1 million (increased to US\$5 million in September 2015) and price verification and registration of contracts awarded to international bidders at the Ministry for Foreign Economic Relations, Investment and Trade (MFERIT). The delays of the procurement processes are mainly due to inefficient functionality of the IMBC and MFERIT. MFERIT registers all contracts for goods, works and services awarded to international firms—a process that is lengthy and delays procurement and overall project implementation. In spite of the local regulations requiring that MFERIT registration shall be completed within 10 working days, the registration process is protracted and involves price verification practice that is contradictory to the IFAD Procurement Guidelines. Furthermore, it discourages many international firms from participating in international competitive bidding in Uzbekistan. While the government appears now to be committed to improve the procurement process, there is an urgent need for action to minimize delays caused by contract registration.
5. To meet these challenges, the government has elaborated a ten-year public procurement development strategy (2016-2025), which is expected to be finalized in the near future. The goals are: (a) continuous development of the legislative and regulatory framework, including a public procurement law, by-laws, and implementation manuals and guides; (b) increased use of new technology and approaches to enhance efficiency, transparency, and value for money; (c) availability of adequate human resources skilled in different aspects of public procurement; (d) well-functioning

procurement control and monitoring system; and (e) effective and well-organized institutions to plan and conduct procurement procedures and conclude, manage and monitor public contracts.

6. The technical assistance to support government efforts to improve its public procurement system is still continuing. A WB grant is currently helping finalize the above-mentioned ten-year public procurement strategy. It is planned for the future that the authorities will help to implement the following priority areas of the strategy: (a) drafting a public procurement law; (b) expansion of e-procurement; (c) procurement human resource development; (d) control and monitoring of procurement; and (e) procurement system administration. Improvements in these areas, in addition to making public procurement more efficient, fair, and transparent, will also increase opportunities for the use of the country systems in Uzbekistan.

7. **New Public Procurement Law.** Additionally, in 2012, the World Bank assisted the GOU in undertaking a Public Expenditure and Financial Accountability (PEFA) Assessment to provide the Government with an integrated assessment of the public finance management system, as well as suggestions on reform planning and implementation. The World Bank also initiated collaboration with the Organization for Economic Cooperation and Development (OECD), which supports Uzbekistan's implementation of the Istanbul Declaration Anti-Corruption Reforms in the Central Asia. Following these engagements, government institutions are now actively collaborating with the Bank teams on developing a Public Procurement Strategy, which will lead to development of a new Public Procurement Law.

8. A meeting of IFAD mission with the World Bank Country Office in Uzbekistan in June 2017 revealed that the draft new Public Procurement Law is now in the finalizing stage. It is expected that the Law will be adopted in Uzbekistan in 2018.

9. IFAD will continue to monitor fiduciary aspects of project implementation closely through regular portfolio reviews and external audits.

10. In view of the above, it is proposed for the ADMP to adhere the IFAD Procurement Guidelines in procurement of Goods, Works and Services.

## **B. Rural Restructuring Agency capacity assessment to implement procurement**

11. Procurement capacity and arrangements at the Project level are considered acceptable. The RRA is a state entity under the MAWR, and is implementing procurement processes for IFAD, ADB and WB projects in Uzbekistan. In this context, the RRA's TORs require that the RRA carry out the complete procurement process starting from the request for expressions of interest and short-listing (in the case of consultant services), to preparation of bidding/requests for proposal documents, inviting and receiving bids/proposals, evaluation of bids/proposals, notification of contract awards, and preparing the contract for signature, including obtaining the relevant donor's no objections where required.

12. The RRA is subject to national law, with certain exemptions and privileges as stipulated in the Financing Agreements with donors. So as to render donor procurement guidelines applicable in lieu of the default national public procurement legislation, the Financing Agreement should identify explicitly the guidelines to be applied for procurement under the relevant Project.

13. The RRA employs the standard ADB and WB procurement procedures and documentation, which are in compliance with IFAD procurement regulations and procedures. Also, the RRA implements the ongoing IFAD-financed HSP and DVCDP. Overall, the RRA's capacity to conduct procurement was found to be in compliance with IFAD procurement regulations and procedures.

14. The RRA, in its activity on procurement takes into account the requirements of national legislation, implementation of which would take additional time and energy demands. Although the national legislation stipulates that these requirements shall not apply to the procurement of goods, works and services, unless otherwise provided in the procedure of foreign loans and grants, projects should follow the requirements of the national legislation in its activity. It is expected that the

procurement shall be conducted without prejudice to the IFAD procedures provided for procurement, both in terms of the stages of procurement and documentation templates to be used (evaluation reports, etc.)

15. The RRA will have overall responsibility for procurement under the Project. As part of Project preparation, the procurement capacity assessments have been completed. A draft procurement plan for the Project has been developed and will be finalized in the first AWPB. The proposed mitigation measures of possible risks are: (1) the RRA will prepare a Project Procurement Manual, to be agreed with IFAD; (2) RRA procurement staff will receive training in procurement seminars that would be organized by the IFAD and other events; (3) the RRA will establish tender committees - the members of the tender committees should receive basic training in procurement if necessary; (4) require each member of a tender committee, to certify in writing that his or her involvement does not create any conflict of interest (e.g., relationship with a supplier or consultant); (5) put in place the necessary mechanisms to ensure that suppliers and consultants are paid according to their contract terms without any delays; and (6) maintain up-to-date records and make these available to IFAD and auditors.

### **C. Procurement arrangements under the Project**

#### **General**

16. Procurement for the proposed Project will be carried out in accordance with the IFAD's Procurement Guidelines and provisions stipulated in the Project Financing Agreement/Letter to the Recipient. If there is conflict between the Government decrees, rules and regulations and the IFAD Procurement Guidelines, then IFAD Guidelines shall prevail.

17. In the context of Uzbekistan, the RRA is identified as the only available choice as an entity with pre-existing capacity to implement procurement processes in compliance with IFAD applicable procurement regulations and procedures. Thus, the RRA will have the main responsibility for procurement under the ADMP, in line with arrangements and TORs as currently applicable for the HSP and the DVCDP as well as for ADB and the WB. Procurement of goods and services will be carried out in accordance with the Sample Bidding documents for procurement of goods and services developed by RRA under the on-going IFAD and WB projects.

18. The RRA operational mode is to assign a Procurement Officer to each of its projects. Required qualifications for the Procurement Officer are detailed in Appendix 5, Annex 1. Thus, a new Procurement Officer would be recruited and specifically assigned for the ADMP and provided with appropriate training from IFAD to develop the requisite capacity. Tentatively, in the initial Project phase, support could be given by RRA staff from other projects.

19. As per current practice under HSP, DVCDP, ADB and WB procurement, an Evaluation Committee for the evaluation of each procurement would be appointed and composed of persons qualified in terms of relevant expertise, seniority and experience, depending on the type, value and complexity of the procurement. The number of members of the Evaluation Committee would depend on the value and complexity of the procurement requirement, but would in all cases be a minimum of three. A member of the Evaluation Committee must always declare when he or she has a conflict of interest in the procurement, which may impact on impartiality in the evaluation process.

20. **ADMP Project Procurement Manual (PPM).** The RRA uses HSP and DVCDP Procurement Manual prepared with support from IFAD. Given that the requirements, actions and conditions of the ADMP are identical to the HSP and DVCDP, it is planned that the available PPM will also be adapted to the ADMP with no objection from IFAD. No amendments and additions shall be made into PPM without prior review and agreement with IFAD.

21. **Procurement Plan.** A Procurement Plan has been developed for the Project that is consistent with the implementation plan, and which provides information on procurement packages, methods and IFAD review requirements. It will be available in the RRA's Project database; and will be updated in a manner agreed upon with the IFAD project team, annually or as required, to reflect the needs and

improvements in the implementing agencies' institutional capacity. All the procurements of goods, works and services must be as per approved procurement plan. Any revisions proposed to the Procurement Plan shall be furnished to IFAD for its prior approval.

22. The items to be procured would include (but not limited to) the following: (a) Works to be procured under this Project include the following: (i) vet stations renovation; (ii) labs construction; and (iii) modernization of irrigation systems. These are mainly subject to the NCB procedure. (b) Goods to be procured under the Project include: (i) procurement of office furniture and vehicles; (ii) equipment for VC stakeholders, (iii) equipment vet stations, (iv) mobile vet clinics, laboratory equipment, (v) equipment for the irrigation systems, etc. These goods shall be procured through ICB, NCB and Shopping. (c) Incremental Operating Costs to be procured include the incremental expenses incurred by the RRA on account of Project implementation, management, monitoring and supervision, including office supplies, office equipment maintenance, communication, local travel, vehicles operation and maintenance, commercial bank charges, salaries of the support staff of RRA, etc.

23. Consulting services & training: Consulting services required under the Project would include the technical assistance, consultancy services and trainings for all components of the Project. These services shall be procured through QCBS, LCS, CQS and ICS.

24. Methods and thresholds for post- and prior-review of procurement packages have been established. The team's procurement and technical specialists will work closely with the RRA to provide continuous inputs into and feedback on the preparation of procurement packages and to carrying out procurement as such.

#### **Procurement methods and thresholds**

25. For each contract to be financed from IFAD proceeds, the types of procurement methods, the need for pre or post-qualification, estimated cost, prior review requirements and time-frame would be identified in the Procurement Plan, as presented in the draft initial 18-month procurement plan appended as Attachment 1 to this Appendix, and subsequently as submitted annually for each fiscal year period by the Recipient and approved by IFAD in the course of Project implementation. While specific thresholds for procurement financed under the Project will be stipulated in IFAD's Letter to the Recipient, the general recommendations are the following.

#### **Goods:**

- International Competitive Bidding (ICB): Goods estimated to cost more than US\$ 250,000 per contract may be procured through ICB using the World Bank's applicable Standard Bidding Documents (SBDs);
- National Competitive Bidding (NCB): Goods estimated to cost more than US\$ 50,000 and less than US\$ 250,000 equivalent per contract may be procured through NCB;
- National Shopping (NS): Goods estimated to cost less than US\$ 50,000 equivalent per contract may be procured through Shopping procedure;
- Direct Contracting (DC): Any contract estimated to cost US\$ 30,000 equivalent or less may be awarded on the basis of DC. Direct contracting will have to be approved by IFAD in advance for those cases where its use is justified.

#### **Works:**

- International Competitive Bidding (ICB): Goods estimated to cost more than US\$ 500,000 per contract may be procured through ICB using the World Bank's applicable Standard Bidding Documents (SBDs);
- National Competitive Bidding (NCB): Goods estimated to cost more than US\$ 50,000 and less than US\$ 500,000 equivalent per contract may be procured through NCB;
- National Shopping (NS): Goods estimated to cost less than US\$ 50,000 equivalent per contract may be procured through Shopping procedure;

- Direct Contracting (DC): Any contract estimated to cost US\$ 30,000 equivalent or less may be awarded on the basis of DC. Direct contracting will have to be approved by IFAD in advance for those cases where its use is justified.

**Consulting services:**

- Quality and Cost Based Selection (QCBS): Contracts estimated to cost US\$ 250,000 equivalent or more shall be awarded on the basis of Expressions of Interest (EOI) published in international press and contracts estimated to cost less than US\$ 250,000 shall be awarded on the basis of EOI published in national press on the basis of QCBS.
- Quality Based Selection (QBS), Selection Based on consultants' qualification (CQS) and Least Cost Selection (LCS): Contracts estimated to cost US\$ 200,000 equivalent or more shall be awarded on the basis of EOI published in international press, contracts estimated to cost less than US\$ 200,000 shall be awarded on the basis of EOI published in national press. Contracts estimated to cost less than US\$ 200,000 equivalent shall be awarded on the basis of QBS, CQS or LCS from short lists prepared by PMU that include three to six firms. However, the specific nature of the assignment will finally determine the method of procurement to be followed.
- Selection of Individual Consultants (IC): Any contracts for consulting services estimated to cost US\$ 100,000 equivalent or less may be awarded on the basis of IC with due consideration of the principles set out in the Procurement Guidelines.
- Single Source Selection (SSS): As an exception to the above, contracts estimated to cost US\$ 30,000 equivalent or less may be awarded on the basis of SSS. Direct contracting by SSS will have to be approved by IFAD in advance for those cases where its use is justified.

**Prior and Post review for Goods, Works and Consulting Services**

26. **Prior Review.** IFAD's main procurement supervision would foresee three main tasks: (i) procurement plan review; (ii) prior or post review of procurements; and (iii) prequalification of bidders (if envisaged).

27. The following shall be subject to prior review by the Fund:

- Goods and Works - The first five (5) contracts and thereafter for goods and works estimated to cost US\$ 75,000 equivalent or more subjected to prior review;
- Consulting Services - The first five (5) contracts for consulting services, and thereafter for consulting companies estimated to cost US\$ 75,000 equivalent or more, and for individual consultants estimated to cost US\$ 50,000 equivalent or more subjected to prior review;
- All Terms of References (TOR), regardless of their costs;
- Awarding any contract based on ICB, DC or SSS regardless their costs.

28. The aforementioned thresholds may be modified by the Fund during the course of Project implementation.

29. With regard to all contracts subject to IFAD's prior review as per the a Letter to the Recipient, IFAD will be provided with draft documents for tender, evaluation reports and recommendations for contract award, draft contracts (for consulting services) and likely revisions as well as other documents, when appropriate.

30. **Post review.** All contracts not covered under prior review will be subject to post review during IFAD implementation support missions. ADMP Procurement Specialist will keep precise records and separate files for each procurement activity.

31. **Disclosure:** The following details shall be sent to the UNDB website for publishing: (i) invitation for bids for procurement of goods and works using ICB procedures, (ii) request for expression of interest for consulting services with estimated costs more than US\$200,000, (iii) contract award

details of all procurement of goods and works using ICB procedure, and (iv) contract award details of all consultancy services with estimated costs more than US\$200,000.

32. **Bidding Documents.** All bidding documents for procurement of works, goods and services shall be prepared by the ADMP Procurement Officer with support from technical experts, as needed, who shall provide specifications, terms of reference, and bill of quantities and so forth as required.

33. **Filing and Records Keeping.** The PMU will use the format of the existing filing and record keeping systems established under the on-going IFAD-financed projects, including hard and/or electronic copies of related documents. All the procurement documents should be kept till the end of the Project and then transferred to the Government Archives. The originals of various valuable documents (such as bid security, performance guarantee, advance guarantee) should be kept in the safe by the PMU accountant. Agreed reporting format are included in the PPM.

34. The following basic principles shall guide the work of the ADMP for the procurement activities: (i) economy and efficiency; (ii) equal opportunities to all eligible bidders; and (iii) fairness, transparency, integrity and good governance.



## Annex 1: EIGHTEEN-MONTH PROCUREMENT PLAN

### REPUBLIC OF UZBEKISTAN AGRICULTURE DIVERSIFICATION AND MODERNIZATION PROJECT (ADMP)

#### PROCUREMENT PLAN FOR 18 MONTHS

#### GOODS, WORKS AND CONSULTING SERVICES

Original: Detailed design  
Period: January 2018 - June 2019

Bid Ref.	Description	Financier	IFAD Loan/Grant Category	Proposed number of packages	Total allocated amount, USD	Allocated amount for 18 months, USD	Procurement selection method	Prior/ Post Review	Start date	Bid Opening Date	End date	Additional remark
<b>Component A - Inclusive Value Chains Development</b>												
<b>A.1 Enabling business environment for inclusive Value Chains</b>												
A.1	International expert for VC Mapping	IFAD Grant	TA&Training	1	55 200	55 200	IC	Prior	Jan-2018	Jan-2018	Feb-2018	
A.2	National Business advisers for VC Mapping (2 people)	IFAD Grant	TA&Training	1	48 000	42 000	IC	Prior	Jan-2018	Jan-2018	Feb-2018	2 people
A.3	International expert for Market Assessment	IFAD Loan	TA&Training	1	82 800	82 800	IC	Prior	Jan-2018	Jan-2018	Feb-2018	
A.4	National Business advisers for Market Assessment (2 people)	IFAD Loan	TA&Training	1	36 000	24 000	IC	Prior	Jan-2018	Jan-2018	Feb-2018	2 people
A.5	VC and business adviser for VC strategic plans preparation	IFAD Grant	TA&Training	1	55 200	55 200	IC	Prior	Feb-2018	Feb-2018	Mar-2018	
A.6	National advisers for VC strategic plans preparation (2 people)	IFAD Grant	TA&Training	1	180 000	72 000	IC	Prior	Feb-2018	Feb-2018	Mar-2018	2 people
<i>Subtotal A.1</i>					<b>457 200</b>	<b>331 200</b>						
<b>A.2 Capacity Development for Value Chain Stakeholders</b>												
A.7	National consultants for business support to Les	IFAD Loan	TA&Training	Multiple	362 890	108 000	CQ	Prior	Apr-2018	Apr-2018	May-2018	
A.8	Meetings and workshops for Les	IFAD Loan	TA&Training	1	25 017	7 500	CQ	Prior	Apr-2018	Apr-2018	May-2018	
A.9	LE-Tailored trainings	IFAD Loan	TA&Training	1	72 849	26 250	CQ	Prior	May-2018	May-2018	Jun-2018	
A.10	LE-Tailored advisory services	IFAD Loan	TA&Training	1	75 052	24 000	IC	Post	May-2018	May-2018	Jun-2018	
A.11	Community Mobilization	IFAD Loan	TA&Training	Multiple	74 184	36 000	CQ	Post	May-2018	May-2018	Jun-2018	
A.12	Refresher trainings to agronomists	IFAD Loan	TA&Training	1	64 811	20 760	CQ/IC	Post	Jun-2018	Jun-2018	Jul-2018	
A.13	International expert / agronomist	IFAD Loan	TA&Training	1	222 295	80 100	IC	Prior	Apr-2018	Apr-2018	May-2018	
A.14	National specialists (2 agronomists)	IFAD Loan	TA&Training	1	131 682	36 000	IC	Post	Apr-2018	Apr-2018	May-2018	
A.15	Demo for zero/minimum tillage	IFAD Loan	Equip&Goods	1	295 956	90 000	NCB/ICB	Prior	Middle 2019	End 2019	End 2019	
A.16	Demo for drip / sprinkle irrigation (open field)	IFAD Loan	Equip&Goods	1	594 089	234 000	NCB	Prior	Jul-2018	Jul-2018	Aug-2018	
A.17	Demo for drip / sprinkle irrigation (greenhouses)	IFAD Loan	Equip&Goods	1	187 775	76 800	Shop	Post	Jul-2018	Jul-2018	Aug-2018	
A.18	Demo for other modern infrastructures/practices	IFAD Loan	Equip&Goods	1	157 344	48 000	Shop	Post	Jul-2018	Jul-2018	Aug-2018	
A.19	Demo for agro-met stations	IFAD Loan	Equip&Goods	1	104 903	38 400	Shop	Post	Jul-2018	Jul-2018	Aug-2018	
A.20	Training on agro-met stations	IFAD Loan	TA&Training	1	43 210	20 760	CQ	Post	Jul-2018	Jul-2018	Aug-2018	
A.21	Demo on water management	IFAD Loan	Equip&Goods	1	104 903	38 400	Shop	Post	Jul-2018	Jul-2018	Aug-2018	

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A.22	Farmers' Needs-assessment	IFAD Loan	TA&Training	1	73 754	72 540	CQ	Prior	Mar-2018	Mar-2018	Aug-2018	
A.23	Farmers Curriculum development	IFAD Loan	TA&Training	1	74 174	72 000	CQ	Prior	Jul-18	Jul-18	Sep-18	
A.24	Master Trainers' TOT	IFAD Loan	TA&Training	1	24 348	11 700	IC	Post	End 2019	End 2019	End 2019	
A.25	Trainings to farmers facilitators	IFAD Loan	TA&Training	1	31 215	15 000	IC	Post	End 2019	End 2019	End 2019	
A.26	FFS Management Specialist	IFAD Loan	TA&Training	1	94 609	36 000	IC	Prior	May-2018	May-2018	Jun-2018	
A.27	FFS Establishment	IFAD Loan	Equip&Goods	1	101 313	5 000	QCBS/CQ	Prior	Middle 2019	End 2019	End 2019	30% BENE
A.28	Refresher trainings to local veterinarians and zoo-technicians	IFAD Loan	TA&Training	1	98 632	20 760	CQ/IC	Post	Jun-2018	Jun-2018	Jul-2018	
A.29	Design and supervision of Vet station rehab / construction	IFAD Loan	TA&Training	1	64 478	42 000	CQ	Prior	Mar-2018	Mar-2018	May-2018	
A.30	Veterinary station rehabilitation / construction	IFAD Loan	Civil Works	1	921 120	600 000	NCB	Prior	Apr-2018	Apr-2018	May-2018	
A.31	Vet Clinics equipment	IFAD Loan	Equip&Goods	1	1 611 960	1 000 000	CQ	Prior	Apr-2018	Apr-2018	May-2018	
A.32	Mobile Vet Clinics	IFAD Loan	Equip&Goods	1	564 186	350 000	Shop	Prior	Apr-2018	Apr-2018	May-2018	
A.33	Technical equipments for vet services	IFAD Loan	Equip&Goods	Multiple	128 957	80 000	Shop	Post	Aug-2018	Aug-2018	Sep-2018	
A.34	Furniture and other equipments	IFAD Loan	Equip&Goods	Multiple	48 359	30 000	Shop	Post	Aug-2018	Aug-2018	Sep-2018	
A.35	Providing refresher trainings to vets	IFAD Loan	TA&Training	1	108 947	80 100	CQ/IC	Post	Mar-18	Mar-2018	Apr-18	
A.36	Providing technical assistance to producers on good practices	IFAD Loan	TA&Training	1	189 219	54 000	CQ	Post	Mar-18	Mar-2018	Apr-18	
A.37	Study tours for vets and participation in intl. conferences	IFAD Loan	TA&Training	Multiple	127 424	40 000	Budget submission	Prior	Mar-18	Mar-2018	Apr-18	
A.38	Design a proposal for funding the establishment of a MIS	IFAD Loan	TA&Training	1	121 200	121 000	CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.39	Animal Identification Strategy development	IFAD Loan	TA&Training	1	94 385	93 450	QCBS/CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.40	AI System development and implementation	IFAD Loan	TA&Training	1	149 667	133 500	QCBS/CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.41	AI System field testing and tutoring	IFAD Loan	TA&Training	1	68 766	53 400	QCBS/CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.42	AI Database maintenance	IFAD Loan	TA&Training	1	198 782	46 800	QCBS/CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.43	RFID reader and other equipment /bb	IFAD Loan	Equip&Goods	1	15 908	16 000	NCB/ICB	Post	Mar-18	Mar-2018	Apr-18	
A.44	Ear tags - Year 1 (including contract for vets)	IFAD Loan	Equip&Goods	1	318 150	300 000	NCB/ICB	Post	Mar-18	Mar-2018	Apr-18	
A.45	Ear tags - Year 2 to Year 6 (including contract for vets) /cc	IFAD Loan	Equip&Goods	1	675 511	60 000	NCB/ICB	Post	Sep-18	Oct-18	Dec-18	
A.46	AI Vehicle	IFAD Loan	Equip&Goods	1	24 392	23 000	Shop	Post	Mar-18	Mar-2018	Apr-18	
A.47	Contract with Women Business Association (WBA)	IFAD grant	TA&Training	1	197 682	31 350	SS	Prior	Mar-18	Mar-2018	Apr-18	Sole Source
A.48	Consultant working with CCI	IFAD grant	TA&Training	1	78 190	24 800	CQ	Prior	Mar-18	Mar-2018	Apr-18	
A.49	Support to Fisheries association	IFAD Loan	TA&Training	1	131 368	85 000	CQ	Prior	Apr-2018	Apr-2018	May-2018	
A.50	International TA in support to SRI-LPF	IFAD Loan	TA&Training	1	85 312	55 200	IC	Post	Jun-2018	Jun-2018	Jul-2018	
A.51	TA in support to SRI-LPF	IFAD Loan	TA&Training	1	74 184	36 000	IC	Post	Jun-2018	Jun-2018	Jul-2018	
A.52	Equipment to support SRI-LPF	IFAD Loan	Equip&Goods	Multiple	64 911	40 000	Shop	Post	Jun-2018	Jun-2018	Jul-2018	
A.53	International experts for Support for standards harmonization	IFAD Loan	TA&Training	Multiple	217 893	160 200	IC	Prior	Mar-2018	Mar-2018	Apr-2018	
A.54	National experts for Support for standards harmonization	IFAD Loan	TA&Training	Multiple	146 894	108 000	IC	Prior	Mar-2018	Mar-2018	Apr-2018	
A.55	Lab equipment for Support for standards harmonization	IFAD Loan	Equip&Goods	1	1 529 838	700 000	NCB/ICB	Prior	Aug-2018	Aug-2018	Sep-2018	

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A.56	Quarantine Lab Design & supervision	IFAD Loan	TA&Training	1	15 150	0	CQ	Prior	Apr-2018	Apr-2018	May-2018	
A.57	Quarantine Lab construction / refurbishment	IFAD Loan	Civil Works	1	181 800	0	NCB	Prior	Jul-2018	Jul-2018	Aug-2018	
A.58	Quarantine Lab analysis equipment	IFAD Loan	Equip&Goods	1	242 407	107 000	Shop	Post	Aug-2018	Aug-2018	Sep-2018	
A.59	Quarantine Lab Office / furniture	IFAD Loan	Equip&Goods	Multiple	53 555	50 000	Shop	Post	Aug-2018	Aug-2018	Sep-2018	
A.60	Quarantine Lab Vehicle	IFAD Loan	Equip&Goods	1	23 230	23 000	Shop	Prior	Aug-2018	Aug-2018	Sep-2018	
A.61	Study tours	IFAD Loan	TA&Training	Multiple	191 136	48 000	Budget submission	Prior	Sep-2018	N/A	Oct-2018	
A.62	Participation in international events	IFAD Loan	TA&Training	Multiple	101 939	24 000	Budget submission	Prior	Sep-2018	N/A	Oct-2018	
A.63	Publications	IFAD Loan	TA&Training	Multiple	159 280	50 000	Budget submission	Prior	Apr-2018	N/A	May-2018	
<b>Subtotal A.2</b>					<b>11 941 186</b>	<b>5 783 770</b>						
<b>Total Component A</b>					<b>12 398 386</b>	<b>6 114 970</b>						
<b>Component B - Inclusive Rural Finance</b>												
<b>B.1 Agricultural guarantee facility</b>												
B.1	International Expert	IFAD Grant	TA&Training	1	53 930	53 930	IC	Prior	Feb-2018	Feb-2018	Mar-2018	
B.2	National Expert	IFAD Grant	TA&Training	1	9 090	9 090	IC	Post	Feb-2018	Feb-2018	Mar-2018	
B.3	Validation workshop	IFAD Grant	TA&Training	1	2 020	2 020	Budget submission	Prior	Jun-2018	N/A	Aug-2018	
B.4	Guarantee Facility Finance	IFAD Loan	VC Financing	N/A	3 000 000		Budget submission	Prior	End 2019	N/A	End 2019	
B.5	Guarantee Facility Finance (next IFAD-PBA)	IFAD Loan	VC Financing	N/A	6 935 000		Budget submission	Prior	End 2019	N/A	End 2019	
<b>Subtotal B.1</b>					<b>10 000 040</b>	<b>65 040</b>						
<b>B.2 Credit lines for agriculture diversification and modernization</b>												
B.6	International expertise	IFAD Grant	TA&Training	1	80 901	80 901	IC	Prior	Mar-2018	Mar-2018	Apr-2018	
B.7	Financial Management Software	IFAD Loan	Equip&Goods	1	224 422	166 100	NCB	Prior	Apr-2018	May-2018	May-2018	
B.8	Financial Management Software (PFI contribution)	PFI	Equip&Goods	1	102 010	75 500	NCB	Prior	May-2018	Jun-2018	Jun-2018	
B.9	Credit line (IFAD)	IFAD Loan	VC Financing	N/A	32 914 200	16 500 000	Budget submission	Prior	Apr-2018	N/A	May-2018	
B.10	Credit line (IFAD next PBA)	IFAD Loan	VC Financing	N/A	32 836 320	3 300 000	Budget submission	Prior	Apr-19	N/A	Jun-19	
B.11	Credit line (PFI)	PFI	VC Financing	N/A	23 350 000	5 837 500	Budget submission	Prior	Jun-2018	N/A	Jul-2018	
B.12	Credit line (Beneficiaries)	BEN	VC Financing	N/A	23 350 000	5 837 500	Budget submission	Prior	Aug-2018	N/A	Sep-2018	
<b>Subtotal B.2</b>					<b>112 857 853</b>	<b>31 797 501</b>						
<b>B.3 Special credit window for youth</b>												
B.13	Credit for Youth	IFAD Loan	VC Financing	N/A	6 000 000	1 200 000	Budget submission	Prior	Oct-2018	N/A	Nov-2018	
B.14	Credit for Youth (next IFAD-PBA)	IFAD Loan	VC Financing	N/A	6 000 000	600 000	Budget submission	Prior	Apr-19	N/A	Jun-19	
<b>Subtotal B.3</b>					<b>12 000 000</b>	<b>1 800 000</b>						
<b>Total Component B</b>					<b>134 857 893</b>	<b>33 662 541</b>						

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<b>Component C - Climate-Resilient Rural Infrastructure</b>												
<b>C.1 Modernization of the irrigation system</b>												
C.1	Engineering Design	IFAD Loan	TA&Training	Multiple	443 101	62 175	QCBS/CQ	Prior	Feb-2018	Feb-2018	Mar-2018	
C.2	Supervision of works	IFAD Loan	TA&Training	Multiple	170 399	23 910	QCBS/CQ	Prior	Feb-2018	Feb-2018	Mar-2018	
C.3	Independent design review and environmental assessment	IFAD Loan	TA&Training	Multiple	68 202	9 570	QCBS/CQ	Prior	Feb-2018	Feb-2018	Mar-2018	
C.4	Selection of schemes and baseline surveys	IFAD Loan	TA&Training	Multiple	136 298	19 125	QCBS/CQ	Prior	Sep-2018	Sep-2018	Nov-18	
C.5	Civil works for gravity flows modernization	IFAD Loan	Civil Works	Multiple	2 033 359	948 375	NCB	Prior	May-2018	Jun-2018	Jul-2018	
C.6	Civil works for deepwell with pressure pipes	IFAD Loan	Civil Works	Multiple	2 198 796	1 025 500	NCB	Prior	May-2018	Jun-2018	Jul-2018	
C.7	Civil works for tertiary modernization with electrical pumps	IFAD Loan	Civil Works	Multiple	1 290 761	602 000	NCB	Prior	May-2018	Jun-2018	Jul-2018	
C.8	Civil works for tertiary modernization with diesel pumps	IFAD Loan	Civil Works	Multiple	1 313 274	612 500	NCB	Prior	Jun-2018	Jul-2018	Aug-2018	
C.9	Civil works for agro-met stations	IFAD Loan	Civil Works	Multiple	207 688	600 000	NCB	Prior	Jun-2018	Jul-2018	Aug-2018	
<i>Subtotal C.1</i>					<i>7 861 878</i>	<i>3 903 155</i>						
<b>C.2 Increasing Capacities of WCAs to operate modernized irrigation systems</b>												
C.10	Traning of WCAs on the operation of the press. systems	IFAD Grant	TA&Training	1	44 600	13 000	CQ/IC	Post	Feb-2019	Mar-2019	May-2019	
C.11	Training on operation of agro-meteorological stations	IFAD Grant	TA&Training	1	16 650		CQ/IC	Post	Middle 2019	Middle 2019	Middle 2019	
C.12	Training regional/district operators on water distribution	IFAD Grant	TA&Training	1	38 350		CQ/IC	Post	Middle 2019	Middle 2019	Middle 2019	
<i>Subtotal C.2</i>					<i>99 600</i>	<i>13 000</i>						
<b>Total Component C</b>					<b>7 961 478</b>	<b>3 916 155</b>						
<b>Component D - Project management</b>												
<b>D.1 Project Management Unit</b>												
D.1	Vehicle	IFAD Loan	Equip&Goods	1	27 300	27 300	Shop	Prior	Jan-2018	Jan-2018	Feb-2018	
D.2	Office Equipment	IFAD Loan	Equip&Goods	Multiple	25 250	25 250	Shop	Prior	Jan-2018	Jan-2018	Feb-2018	
D.3	Baseline Survey	IFAD Loan	TA&Training	1	25 250	25 250	CQ	Prior	Apr-2018	May-2018	Jul-2018	
D.4	PIM preparation	IFAD Loan	TA&Training	1	10 100	10 100	IC	Prior	Jan-2018	Feb-2018	Feb-2018	
D.5	Start-up Workshop	IFAD Loan	TA&Training	1	7 300	7 300	Budget submission	Prior	Jan-2018	N/A	Feb-2018	
D.6	Annual Review and Planning Workshop	IFAD Loan	TA&Training	Multiple	10 700	2 000	Budget submission	Prior	Jan-2019	N/A	Jan-2019	
D.7	Ad hoc Studies and Assistance	IFAD Loan	TA&Training	Multiple	35 000	7 000	IC	Post	Feb-2019	Mar-2019	Apr-2019	
D.8	Mid-term Review	IFAD Loan	TA&Training	1	32 200		CQ	Prior	Middle 2021	Middle 2021	Middle 2021	
D.9	Final Impact Survey	IFAD Loan	TA&Training	1	27 500		CQ	Prior	Middle 2022	Middle 2022	Middle 2022	
D.10	PMU/PIT Gender Awareness Training	IFAD Loan	TA&Training	1	10 500	5 000	Budget submission	Prior	Sep-2018	N/A	Oct-2018	
D.11	Gender Awareness Trainers	IFAD Loan	TA&Training	1	4 800	1 500	IC	Post	Sep-2018	Sep-2018	Oct-2018	
D.12	PMU/PIT Staff Training Courses	IFAD Loan	TA&Training	Multiple	26 300	5 000	Budget submission	Prior	Jun-2018	N/A	Aug-2018	
D.13	ADMP Website	IFAD Loan	TA&Training	1	10 400	5 000	IC	Post	May-2018	May-2018	Jun-2018	
D.14	ADMP telecommunications	IFAD Loan	TA&Training	1	52 700	10 000	CQ/IC	Post	May-2018	May-2018	Jun-2018	
D.15	Project Manager	IFAD Loan	Recurrent/Salaries	1	88 100	11 000	IC	Prior	Jan-2018	Jan-2018	Jan-2018	

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D.16	Chief Accountant	IFAD Loan	Recurrent/Salaries	1	80 800	10 000	IC	Prior	Jan-2018	Jan-2018	Jan-2018	
D.17	Procurement Assistant	IFAD Loan	Recurrent/Salaries	1	58 800	7 300	IC	Prior	Jan-2018	Jan-2018	Jan-2018	
D.18	GESI / Youth Specialist	IFAD Loan	Recurrent/Salaries	1	80 800	10 000	IC	Post	Jan-2018	Jan-2018	Jan-2018	
D.19	Administrative Assistant/Translator	IFAD Loan	Recurrent/Salaries	1	51 400	6 400	IC	Post	Jan-2018	Jan-2018	Jan-2018	
D.20	Driver	IFAD Loan	Recurrent/Salaries	1	29 400	3 700	IC	Post	Jan-2018	Jan-2018	Jan-2018	
D.21	Staff Insurance	IFAD Loan	Recurrent/Salaries	N/A	97 300	12 000	Budget submission	Prior	Jan-2018	N/A	Jan-2018	
D.22	Office Rent	GOU	Recurrent/Salaries	N/A	77 000	10 000	N/A	N/A	Jan-2018	N/A	Jan-2018	
D.23	International travel	IFAD Loan	Recurrent/Salaries	Multiple	45 000	5 600	Budget submission	Prior	Jun-2018	N/A	Sep-2018	
D.24	Local travel	IFAD Loan	Recurrent/Salaries	Multiple	32 000	4 000	Budget submission	Post	Jun-2018	N/A	Sep-2018	
D.25	Banking Services	IFAD Loan	Recurrent/Salaries	Multiple	58 000	7 200	Budget submission	Post	Jan-2018	N/A	Jan-2018	
D.26	External Audi	IFAD Loan	Recurrent/Salaries	1	90 000	11 200	LCS	Prior	Sep-2018	Oct-2018	Nov-2018	
D.27	Accounting Software update / maintenance	IFAD Loan	Recurrent/Salaries	1	19 300	2 400	Shop	Post	Feb-2018	Feb-2018	Mar-2018	
D.28	Telecommunication	IFAD Loan	Recurrent/Salaries	Multiple	38 600	4 800	Budget submission	Post	Jul-2018	N/A	Aug-2018	
D.29	Utilities	IFAD Loan	Recurrent/Salaries	Multiple	19 300	2 400	Budget submission	Post	Jan-2018	N/A	Jan-2018	
D.30	Stationery	IFAD Loan	Recurrent/Salaries	Multiple	38 600	4 800	Budget submission	Post	Jan-2018	N/A	Jan-2018	
D.31	Operation and Maintenance (Vehicle and Office Equipment)	IFAD Loan	Recurrent/Salaries	Multiple	64 000	8 000	Budget submission	Post	Jan-2018	N/A	Jan-2018	
<b>Subtotal D.1</b>					<b>1 273 700</b>	<b>251 500</b>						
<b>D.2 Project Implementation Team</b>												
D.32	Vehicles	IFAD Loan	Equip&Goods	1	81 800	81 800	NCB	Prior	Jan-2018	Jan-2018	Feb-2018	
D.33	Office Equipment	IFAD Loan	Equip&Goods	Multiple	16 000	16 000	Shop	Prior	Jan-2018	Jan-2018	Feb-2018	
D.34	Regional coordinator / Value chain / Business	IFAD Loan	Recurrent/Salaries	1	220 000	27 300	IC	Prior	Jan-2018	Jan-2018	Jan-2018	
D.35	Rural finance officer	IFAD Loan	Recurrent/Salaries	1	58 800	7 300	IC	Prior	Jan-2018	Jan-2018	Jan-2018	
D.36	Engineer (irrigation)	IFAD Loan	Recurrent/Salaries	1	58 800	7 300	IC	Post	May-2018	May-2018	Jun-2018	
D.37	M&E Specialist	IFAD Loan	Recurrent/Salaries	1	58 800	7 300	IC	Prior	Jan-2018	Jan-2018	Jan-2018	
D.38	Staff Insurance	IFAD Loan	Recurrent/Salaries	N/A	99 200	12 300	Budget submission	Prior	Jan-2018	N/A	Jan-2018	
D.39	Office Rent	GOU	Recurrent/Salaries	N/A	57 000	6 400	N/A	N/A	Jan-2018	Jan-2018	Jan-2018	
D.40	Local travel	IFAD Loan	Recurrent/Salaries	Multiple	40 200	6 400	Budget submission	Post	Jun-2018	N/A	Sep-2018	
D.41	Telecommunication	IFAD Loan	Recurrent/Salaries	Multiple	8 000	2 600	Budget submission	Post	Jul-2018	N/A	Aug-2018	
D.42	Utilities	IFAD Loan	Recurrent/Salaries	Multiple	8 000	2 600	Budget submission	Post	Jan-2018	N/A	Jan-2018	
D.43	Stationery	IFAD Loan	Recurrent/Salaries	Multiple	8 000	2 600	Budget submission	Post	Jan-2018	N/A	Jan-2018	
D.44	Operation and Maintenance (Vehicle and Office Equipment)	IFAD Loan	Recurrent/Salaries	Multiple	139 000	12 000	Budget submission	Post	Jan-2018	N/A	Jan-2018	
<b>Subtotal D.2</b>					<b>853 600</b>	<b>191 900</b>						
<b>Total Component D</b>					<b>2 127 300</b>	<b>443 400</b>						
<b>Total ADMP</b>					<b>157 345 057</b>	<b>44 137 066</b>						

**Abbreviations:**

BEN - Beneficiaries  
PFI - Participating Financial Institutions  
SBP - Sub Borrower  
FIN INT - Financial Intermediaries  
PF - Private Farmers  
DF - Dekhan Farmers  
DVC - Dairy Value Chain  
NIF - Non IFAD Financing  
PIM - Project Implementation Manual  
N/A - Not Applicable

**Procurement Selection Methods:**

ICB - International Competitive Bidding  
NCB - National Competitive Bidding  
QCBS - Quality and Cost Based Selection  
QBS - Quality Based Selection  
LCS - Least Cost Selection  
CQ - Consultant Qualification Selection  
IC - Individual Consultants Selection  
Shop - National/Local Shopping  
DC - Direct Contracting  
SSS - Single Source Selection



## Appendix 9: Project cost and financing

### A. Introduction

1. This section describes the assumptions underlying the derivation of Project costs, estimated Project costs and financing plan. The Project costs are based on parameters collected during the design missions in May-June and August-September 2017. The key parameters are presented below.

2. **Project Period.** The expected duration of the proposed Project is **six years**.

3. **Inflation.** The official annual inflation rate of the Uzbek Sum (UZS) has been relatively stable in the last years, rising to 5.7 per cent in 2016 from 5.6 per cent in 2015. Nevertheless, the inflation in Uzbekistan tends to run much faster than officially reported, also in relation to the steady devaluation of the official exchange rate of the UZS to the US Dollar (US\$).<sup>147</sup> For ADMP's cost analysis, the official annual inflation rate of 5.7 per cent is taken as constant for the duration of the Project period 2018-2023. The international inflation rate is set at 2.0 per cent per year, in line with medium to long term projections of EIU and the World Bank group (Commodity Market Outlook, April 2017) for the US\$.

4. **Exchange Rate.** On September 5th 2017, during the course of the design mission, the Central Bank of Uzbekistan (CBU) ended its policy of administratively supporting the official exchange rate of the UZS to allow it to float freely. The official and black-market exchange rates thus broadly converged, and the UZS experienced overnight a depreciation of about 48%, from the prevailing official rate of 4,210 UZS adopted until the preceding week. The exchange rate used in the analysis is set at the rate prevailing at the end of the second design mission (12 September 2017) or US\$ 1 = UZS 8,092.<sup>148</sup>

5. **Purchasing power exchange rates.** The ADMP costs are presented in both UZS and US\$. Conversions from US\$ to UZS use the following constant purchasing power exchange rates (Table 1):

**Table 1. Constant Purchasing Power Exchange Rates (UZS/US\$)**

	At project design	PY1	PY2	PY3	PY4	PY5	PY6
UZS / 1 US\$	8,092.0	8,240.2	8,539.1	8,848.9	9,169.9	9,502.5	9,847.2

6. **Taxes and Duties.** There is VAT of 20 per cent levied on all imported and locally procured goods and services. For directly recruited local staff the Project would cover the social insurance of 25 per cent. The Government would finance the cost of all taxes on goods and services procured under the Project (including social fund for project staff).

7. **Expenditure Accounts.** The expenditure accounts, together with the breakdown of taxes, physical contingencies and the average rates for foreign exchange used in the analysis are shown in Table 2. Physical contingencies have only been applied on the items for which the required amounts could not be reasonably estimated, and have not been applied to the funds earmarked for the loans and demonstrations/innovations as they follow a demand-driven delivery scheme.

<sup>147</sup> The latest available Economist Intelligence Unit's (EIU) Country Report (2<sup>nd</sup> quarter 2017) forecasts the Uzbekistan's inflation rate at around 10 per cent for 2017, rising to 12 per cent in 2018.

<sup>148</sup> Central Bank of Uzbekistan.

**Table 2. Expenditure Accounts**

Description	Taxes (share in total costs)	Physical Contingency	Foreign Exchange
<b>Investment Costs</b>			
Equipment and Goods	20.0%	5%	60%
Vehicles	25.0%	0%	55%
Technical Assistance			
<i>International TA</i>	20%	0%	100%
<i>National TA</i>	20%	0%	0%
<i>Studies</i>	20%	0%	50%
Training and Workshops	20%	0%	30%
Credit lines	20%	0%	40-80%
<b>Recurrent Costs</b>			
Salaries and allowances	20%	0%	0%
Operation and Maintenance	16.67%	5%	50%
Other Operating Expenses	16.67%	5%	0%

8. **Project Investment Component Structure.** The Project will have three principal inter-related components as well as another for the required support for Project management and implementation as follows:

- (i) Inclusive Value Chains Development;
- (ii) Inclusive Rural Finance; and
- (iii) Climate-resilient Rural Infrastructure.

9. **Project Organisation and Management.** The implementation responsibility will rest the Rural Restructuring Agency (RRA) of the Ministry of Agriculture and Water Resources (MAWR). This is in line with similar arrangements established under the ongoing IFAD-funded Horticulture Support Project (HSP), the recently started Dairy Value Chain Development Project (DVCDP), and other International Financial Institutions (IFIs) funded operations in rural areas. For the operationalization of the ADMP, the RRA will expand its scope by establishing a light Project Management Unit (PMU) and will be responsible for overall management, coordination, oversight, monitoring, supervision, procurement and financial management, knowledge management and evaluation of the ADMP. The PMU will be supported by a regional Project Implementation Team (PIT) operating in Andijan, Fergana and Namangan oblasts, supported by contracted service providers for specific activities. The PMU and PIT would work closely with oblast and district governments to coordinate activities, and to stimulate learning across government institutions regarding inclusive value chains.

## B. Project Costs

10. The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 157.0 million (UZS 1,255 billion). Physical and price contingencies are at 1% of the total Project costs. This is mostly due to the fact that investments associated with the rural finance (lumpsum with no contingency) make up 85 per cent of the total Programme costs.

11. The foreign exchange component is estimated at US\$ 109.0 million, about 69% of the total Project costs. Taxes and duties make up approximately US\$ 24.5 million. The Project management cost makes about 1.4 per cent of the total Project costs (2.1 million US\$). Table 3 summarizes the Project costs by components.



**Table 3. Project Costs by Component**

	(UZS Million)			(US\$ '000)			%	%
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
<b>1. Inclusive Value Chains Development</b>								
1.1 Enabling business env. for inclusive VC	2 449,0	1 250,7	3 699,7	303	155	457	34	-
1.2 CD for VC Stakeholders	47 322,6	43 421,2	90 743,8	5 848	5 366	11 214	48	7
<b>Subtotal 1. Inclusive Value Chains Development</b>	49 771,5	44 671,9	94 443,4	6 151	5 521	11 671	47	7
<b>2. Inclusive Rural Finance</b>								
2.1 Rural guarantee facility	48,407.0	32,508.2	80,915.1	5,982	4,017	9,999	40	6
2.2 ADM Credit lines	184,126.9	726,149.7	910,276.5	22,754	89,737	112,491	80	72
2.3 Credit line for youth	58 262,4	38 841,6	97 104,0	7 200	4 800	12 000	40	8
<b>Subtotal 2. Inclusive Rural Finance</b>	290,796.2	797,499.4	1,088,295.7	35,936	98,554	134,490	73	86
<b>3. Climate-Resilient Rural Infrastructure</b>								
3.1 Modernization of irrigation systems	27 479,6	31 931,4	59 411,1	3 396	3 946	7 342	54	5
3.2 Increasing capacities of WUAs	538,1	230,6	768,7	67	29	95	30	-
<b>Subtotal 3. Climate-Resilient Rural Infrastructure</b>	28 017,7	32 162,1	60 179,8	3 462	3 975	7 437	53	5
<b>4. Project management</b>								
4.1 Project Management Unit	8 308,7	1 236,5	9 545,1	1 027	153	1 180	13	1
4.2 Project Implementation Team	5 491,8	934,0	6 425,9	679	115	794	15	1
<b>Subtotal 4. Project management</b>	13 800,5	2 170,5	15 971,0	1 705	268	1 974	14	1
<b>Total BASELINE COSTS</b>	382,386.0	876,503.8	1,258,889.9	47,255	108,317	155,572	70	100
Physical Contingencies	1,235.9	1,576.7	2,812.5	153	195	348	56	-
Price Contingencies	14,068.3	11,619.1	25,687.3	582	482	1,065	45	1
<b>Total PROJECT COSTS</b>	397,690.2	889,699.6	1,287,389.8	47,990	108,994	156,984	69	101

## C. Financing

12. The ADMP will be financed through multiple sources, including IFAD loan, IFAD grant, Government, Beneficiaries and Participating Financial Institutions (PFI):

- **IFAD loan (current PBAS - 2016-2018):** for an amount of US\$ 46.2 million, the loan will cover 30 per cent of the Project, contributing to: 50 per cent of the Inclusive Value Chains Development Component (Component 1, amounting to US\$ 7.9 million); 26 per cent of the Inclusive Rural Finance component (Component 2, amounting to US\$134.5 million); 42 per cent of the Climate-resilient Rural Infrastructure Component (Component 3, amounting to US\$ 7.9 million), and 64 per cent of the Project Management Component (Component 4, amounting to US\$ 2.1 million).
- **Financing gap:** The financing gap of US\$ 47 million may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation. The financing gap represents 30 per cent of the ADMP costs, notably: 31 per cent of Component 1; 30 per cent of Component 2; 41 per cent of Component 3; and 21 per cent of Component 4.
- **IFAD grant (PBAS 2016-2018):** an amount of US\$ 0.3 million corresponding to about 0.2 per cent of the project cost will cover part of the international technical assistance and trainings under component 1 (for 1.7 per cent of the cost) and technical assistance to MAWR under component 2 (for 0.1 per cent of the cost).
- **Government:** in the form of taxes, the Government will waive all taxes related to project expenditures, including all those associated to goods and services procured under the loans generated by the project's funded credit lines, and social fund associated to personnel. Taxes represent about 16 per cent of the cost, for an amount of US\$ 24.5 million.
- **The Participating Financial Institutions (PFIs):** a contribution of about US\$ 19.6 million is expected to match the funds made available by the project.

- **Beneficiaries** would contribute by at least US\$ 19.5 million, corresponding to their 20 per cent contribution to the credit lines.

13. **Implications for Government Budget.** Apart from repayment of any loan finance, implications for Government's budget are limited in terms of its contribution to the Project costs and there will be minimum requirements for post-Project funding by the Government for Operation and maintenance of Vet clinics, inter-farm irrigation schemes, and Plant Quarantine and other Labs as well as in that up-scaling and replication, subject to Government policy, feasible and attractive for the private sector.

14. The Government contribution would cover all taxes and duties on all Project inputs that involve funding from the IFAD Loan and Grant or any other external source of funding associated with the IFAD Loan and Grant. The estimate of taxes and duties is based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan and Grant, any future changes in the rates and/or structures of taxes and duties would have to apply to the Project.

15. **Cost summary.** Table 4 and Table 5 below provide summaries by the Project components and expenditure accounts of the proposed financing arrangement. The other summary financing tables as well as detailed cost tables and COSTAB file are available on file.

**Table 4. Financing Plan by Components – including contingencies ('000 US\$)**

	IFAD Grant I		IFAD Grant II*		IFAD Loan I		IFAD Loan II*		GOU		PFI		Beneficiaries		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>1. Inclusive Value Chains Development</b>																
1 Enabling business environment for inclusive Value Chains	106	23.2	176	38.5	56	12.2	43	9.4	76	16.7	-	-	-	-	457	0.3
2 Capacity Development for Value Chain Stakeholders	101	0.8	230	1.9	6,204	52.0	3,399	28.5	1,992	16.7	-	-	15	0.1	11,941	7.6
<b>Subtotal 1. Inclusive Value Chains Development</b>	207	1.7	406	3.3	6,260	50.5	3,442	27.8	2,068	16.7	-	-	15	0.1	12,398	7.9
<b>2. Inclusive Rural Finance</b>																
2.1 Ag. guarantee facility	-	-	-	-	3,054	30.5	6,935	69.3	11	0.1	-	-	-	-	10,000	6.4
2.2 ADM Credit lines	93	0.1	94	0.1	27,196	24.2	27,363	24.3	18,750	16.7	19,543	17.4	19,458	17.3	112,498	71.7
2.3 Credit line for youth	-	-	-	-	5,000	41.7	5,000	41.7	2,000	16.7	-	-	-	-	12,000	7.6
<b>Subtotal 2. Inclusive Rural Finance</b>	93	0.1	94	0.1	35,250	26.2	39,298	29.2	20,761	15.4	19,543	14.5	19,458	14.5	134,498	85.7
<b>3. Climate-Resilient Rural Infrastructure</b>																
3.1 Modernization of irrigation systems	-	-	-	-	3,292	41.9	3,260	41.5	1,310	16.7	-	-	-	-	7,862	5.0
3.2 Increasing capacities of WUAs	-	-	-	-	37	37.3	46	46.0	17	16.7	-	-	-	-	100	0.1
<b>Subtotal 3. Climate-Resilient Rural Infrastructure</b>	-	-	-	-	3,329	41.8	3,305	41.5	1,327	16.7	-	-	-	-	7,961	5.1
<b>4. Project management</b>																
4.1 Project Management Unit	-	-	-	-	800	62.9	275	21.6	198	15.5	-	-	-	-	1,273	0.8
4.2 Project Implementation Team	-	-	-	-	560	65.7	179	21.0	114	13.4	-	-	-	-	853	0.5
<b>Subtotal 4. Project management</b>	-	-	-	-	1,361	64.0	454	21.4	312	14.7	-	-	-	-	2,126	1.4
	300	0.2	500	0.3	46,200	29.4	46,500	29.6	24,468	15.6	19,543	12.4	19,473	12.4	156,984	100.0

\* - IFAD Loan and Grant II represent the financing gap which may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation.

**Table 5. Expenditure Accounts by financier ('000 US\$)**

	IFAD Grant		IFAD Grant II*		IFAD Loan I		IFAD Loan II*		GOU		PFI		Beneficiaries		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
<b>I. Investment Costs</b>																
A. Equipment and goods	-	-	-	-	3,652	53.2	2,054	29.9	1,144	16.7	-	-	15	0.2	6,866	4.4
B. Civil Works	-	-	-	-	3,596	44.1	3,192	39.2	1,358	16.7	-	-	-	-	8,147	5.2
C. Vehicles	-	-	-	-	99	75.0	-	-	33	25.0	-	-	-	-	132	0.1
<b>D. Technical Assistance and Studies</b>																
International TA	46	3.5	46	3.5	741	56.7	257	19.6	218	16.7	-	-	-	-	1,307	0.8
National TA	254	6.6	454	11.8	1,428	37.2	980	25.5	640	16.7	85	2.2	-	-	3,841	2.4
<b>Subtotal Technical Assistance and Studies</b>	300	5.8	500	9.7	2,169	42.1	1,236	24.0	858	16.7	85	1.7	-	-	5,148	3.3
E. Training and Workshops	-	-	-	-	466	49.5	319	33.8	157	16.7	-	-	-	-	942	0.6
<b>F. Inclusive Finance</b>																
1. Guarantee Finance	-	-	-	-	3,000	30.2	6,935	69.8	-	-	-	-	-	-	9,935	6.3
2. Value chain Finance	-	-	-	-	27,129	24.2	27,363	24.4	18,682	16.7	19,458	17.4	19,458	17.4	112,091	71.4
3. Investment Capital for Youth	-	-	-	-	5,000	41.7	5,000	41.7	2,000	16.7	-	-	-	-	12,000	7.6
<b>Subtotal Inclusive Finance</b>	-	-	-	-	35,129	26.2	39,298	29.3	20,682	15.4	19,458	14.5	19,458	14.5	134,026	85.4
<b>Total Investment Costs</b>	300	0.2	500	0.3	45,112	29.1	46,100	29.7	24,232	15.6	19,543	12.6	19,473	12.5	155,261	98.9
<b>II. Recurrent Costs</b>																
A. Salaries /a	-	-	-	-	719	73.2	263	26.8	-	-	-	-	-	-	982	0.6
B. Operation and Maintenance	-	-	-	-	122	60.3	47	23.0	34	16.7	-	-	-	-	203	0.1
C. Other Operating Costs	-	-	-	-	247	45.9	90	16.7	202	37.4	-	-	-	-	539	0.3
<b>Total Recurrent Costs</b>	-	-	-	-	1,089	63.2	400	23.2	235	13.7	-	-	-	-	1,724	1.1
<b>Total PROJECT COSTS</b>	300	0.2	500	0.3	46,200	29.4	46,500	29.6	24,468	15.6	19,543	12.4	19,473	12.4	156,984	100.0

\* - IFAD Loan and Grant II represent the financing gap which may be sourced by subsequent PBAS cycles (under financing terms to be determined and subject to internal procedures and subsequent Executive Board approval) or by cofinancing identified during implementation.

## Appendix 10: Economic and Financial Analysis

### Introduction

1. The goal of the ADMP is to improve incomes and livelihoods of rural people in the Project area. The Project's development objective is to increase inclusiveness and profitability of selected value chains through enhanced productivity and market access and improved natural resources. The Project will be implemented in the three Regions of Fergana Valley, namely Andijan, Fergana and Namangan.<sup>149</sup> The Project's will benefit value chain stakeholders including producers, processors, traders, with primary target group including: (i) rural low-income households (household farmers and *dekhan* farmers), including female-headed households, who strive to increase income from agriculture through active participation in the Project supported value chains; (ii) small private farmers (with farm size of up to 5 ha); (iii) agribusinesses with existing or potential linkages with (i) and (ii); and (iv) unemployed/underemployed youth in the Project regions. The Project will mainstream women in all its activities. In order to achieve its objectives, the Project will identify interested operators along the value chains (Leading Entities, LEs), through appropriate market assessments and value chains mapping exercises.

2. The Project will have a three-pronged approach to reach its development objective. On one side, the Project will enhance the capacities of targeted stakeholder (farmers, LEs, associations, public institutions, etc.) in order to strengthen their performance and their interactions. Main benefits will include an increase and strengthening of the commercial agreements<sup>150</sup> between supported smallholder household/ *dekhan* farmers and LEs, as well as a generalized adoption of new / improved technologies or practices.<sup>151</sup> This group of interventions is expected to cost about 5 per cent of the project's investment. With a more substantial contribution (85 per cent of Project's investment), the project will aim to enhance productivity and efficiency along targeted smallholder-inclusive value chains through increased stakeholders' access to financial services, with particular attention to smallholders and youth. The various forms of support to the financial sector include: (a) the support to the Guarantee Facility for Small Entrepreneurship Support established in February 2017 (about 2,475 loans)<sup>152</sup>; (b) targeted contributions to Participating Financial Institutions' (PFIs) capacity, to increase their volume of loans guaranteed generating at least 1,200 loans to selected LEs<sup>153</sup>; and (c) specific contribution to PFIs to establish credit lines for the youth – women and men, involved in the selected value chains (about 1,000 loans).<sup>154</sup> Finally, through the promotion of climate resilient infrastructures, including modernized irrigation technologies (about 8 per cent of the investment), the project will contribute to enhance the irrigation efficiency in some 3,500 ha. The models presented in the economic and financial analysis are aiming to demonstrate how the Project interventions will generate benefits to the target group, to assess their potential interactions and the potential in creation of full-time equivalent jobs, as well as to assess opportunities for and

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<sup>149</sup> The financial and economic analysis is based on their current agricultural production and potential.

<sup>150</sup> Including, but not limited to, formal contracts with traders/ aggregators/ processors. LEs will specify those linkages in their VCDPs/Roadmaps, developed by LEs within Sub-component 1.1.

<sup>151</sup> The outreach is mostly determined by Sub-component 1.2's interventions. Beneficiaries include 1,200 LE representatives (also benefitting of support under Sub-component 1.1 for their roadmap; about 5,000 LE suppliers, benefitting from inclusive workshops/ trainings; about 600 *Mahalla* leaders (community mobilization and TOT); about 1,000 additional *Mahalla* members; 3,200 producers benefitting of demo plots (10 farmers at least for each demo plot established); 2,250 FFS members. Adoption rate is about 80%.

<sup>152</sup> The Project's contribution to the Rural Guarantee Facility (US\$ 9.9 million) will allow mobilizing at least a five-fold amount of loans. With an average loan size of US\$ 20,000, this implies about 2,475 loans.

<sup>153</sup> ADMP's funded credit lines (US\$ 54.8 million) will generate some 1,200 loans with an average amount of US\$ 45,000. The target is expected to be achieved faster than the Rural Guarantee Facility as the credit lines are expected to be immediately operational.

<sup>154</sup> Under the assumption that youth would borrow an average of US\$ 10,000, the credit lines dedicated to Youth women and men (US\$ 10.0 million) will be able to generate about 1,000 loans.

constraints to economic development and associated risks. They are for demonstration purposes only, and are used as building blocks for the ADMP approach.

## II. Project Benefits

3. The Project is expected to lead to increased income of households farmers, *dekhan* farmers, private farmers, agri-firms and rural entrepreneurs. Benefits would accrue from: (i) increased farm and herd productivity and reduction of production costs due to the adoption of modern technologies; (ii) reduced losses during harvesting; (iii) a subsequent increased proportion of marketed farm produce; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs and in increased sales and net margins; (v) increased farm income through diversification from wheat and cotton production; (vi) increased employment opportunities, either for hired or family labour, for both on-farm and off-farm activities; (vii) increased trade (export) and improved balance of payments; and (viii) increased revenues for the government as a result of increased volume of taxable production. Principal increases in incomes would be largely dependent on farmers/household/rural entrepreneurs accessing dedicated credit lines from PFIs, benefiting of capacity development interventions from the Project (including demonstrations) as well as from participating LEs, adopting efficient techniques and technologies (including in irrigation) promoted by the Project. This will generally contribute to create a favourable economic environment in Fergana Valley, encouraging farmers/rural entrepreneurs to produce more competitive products and establish stronger commercial linkages.

4. This Appendix presents the Economic and Financial Analysis (EFA) of ADMP's interventions through the use of indicative activity models. The analysis builds upon the precautionary principle, accounting for Project benefits in a realistic and conservative manner. A financial analysis is carried out to present the scenarios with and without project interventions. The key-indicators used to carry out the analysis are the Net Present Values (NPVs), Financial and Economic Internal Rate of Return (FIRR – EIRR), benefit-cost ratios (B/C), switching values for both benefits and costs and the financial return on labour. The aggregation of the models at project level will allow also estimating the potential for incremental full-time equivalent job creation.

## III. Financial Analysis

5. The primary objective of the financial analysis is to determine the financial viability and incentives for the Project target group as a result of their engagement in Project activities, and hence to examine Project's impacts on family labour, financial flow and household incomes.

6. The economic activities selected for the analysis correspond to the ones with good adoption potential by the value chain stakeholders in the Project area in the on-going phase of diversification from the prevailing wheat and cotton production. The analysis presents several sets of models:

- A first set represents the crop production, and includes open field vegetable production, apple and grapes production. All incremental benefits have been estimated in comparison with wheat production.
- A second set represents three livestock products, including small ruminants, aquaculture (extensive and indoor), and rabbit breeding (as an emerging profitable trend). Incremental benefits in this case are measured compared to smaller herds (for small ruminant, rabbit breeding, and indoor intensive aquaculture) and to wheat production for extensive catfish production.
- A third set models the benefit streams generated by rural entrepreneurs operating in the above value chains, comprising small-scale slaughter house and warehouses with packaging units.
- A fourth set includes few models that represent the possible economic activities undertaken by youth (women and men) as fruit of the dedicated credit lines. These include

vegetable production in backyard greenhouses (compared to open field vegetable production), and beekeeping (as fully incremental activity). The specific analysis of youth credit lines will take into account also small scale sheep/goat rearing and intensive aquaculture. All these activities are more attractive to youth due to the limited capital, collateral, or land required for the investment.

- A fifth set illustrates the benefits of widespread dissemination of drip irrigation technologies.
- Finally, the analysis presents two models showing the benefits of minimum/no-tillage and conservation agriculture technologies as possible results.

7. The above sets of models were used as building blocks for the economic evaluation of the entire Project once aggregated for the target stakeholders. All the technical assumptions within the models have been elaborated jointly with the design team members and on the basis of field surveys, national statistics, international and national expert consultation. Key features of the models are presented in Table 1.

**Table 1. Summary of Financial models**

Models	Unit	Ha	Inv. Cost (UZS '000)	Inv. Cost (UZS)	NPV (UZS '000) 14%	NPV (US\$) 14%	FIRR	B/C ratio	Switching values Benefits	Switching values Costs	Returns to labour (UZS)	Returns to HH labour (UZS)	Number of incremental jobs*	Number of Incremental supplies
<b>Production diversification:</b>														
Wheat to Vegetable (tomato)	DF-F-AF	1	40,461	5,000	47,584	5,880	48.5%	1.61	-38%	61%		354,237	0.10	
Wheat to Orchard (apple)	DF-F-AF	1	88,140	10,892	39,259	4,851	19.2%	1.69	-41%	69%	800,483	2,401,448	0.16	
Wheat to Orchard (vineyard)	DF-F-AF	1	99,302	12,271	254,453	31,445	48.7%	2.80	-64%	180%	1,637,097	4,911,290	0.16	
(Y) Garden tomato to GH Tomato	HH-DF	0.1	35,825	4,427	7,202	890	23.2%	1.10	-9%	10%		521,927	0.00	
(Y) Sheep/Goat: 5 --> 20 heads	HH-DF	backyard	5,400	667	3,438	425	38.6%	1.24	-20%	24%	84,643	22,081	0.07	
Sheep/Goat: 50 --> 175 heads	F-AF	backyard	44,800	5,536	38,537	4,762	50.3%	1.34	-25%	34%	129,410	225,061	0.70	
(Y) Rabbit breeding (vs Sheep/Goat)	HH-DF	backyard	13,440	1,661	15,293	1,890	76.0%	1.71	-42%	71%	0	65,643	0.00	
Catfish aquaculture (extensive)	DF-F-AF	0.2	35,000	4,325	42,127	5,206	46.5%	1.22	-18%	22%	82,309		1.30	
(Y) Catfish aquaculture (intensive)	HH-DF	backyard	35,600	4,399	32,397	4,004	36.0%	1.20	-17%	20%		445,394	0.00	
(Y) Beekeeping	HH-DF	backyard	48,800	6,031	15,905	1,966	29.8%	1.12	-11%	12%	41,718	166,870	1.09	
<b>Processing</b>														
Warehouse (80 T)	AF	NA	271,500	33,551	95,312	11,778	16.9%	1.02	-2%	2%	34,764,063		4	50
Warehouse (1,000 T)**	AF	NA	3,896,000	481,455	338,993	41,892	14.8%	1.02	-2%	2%	40,698,560		40	250
Slaughter house	AF	NA	40,000	4,943	118,845	14,686	71.9%	1.37	-27%	37%	7,881,727		2	10
<b>Demonstration</b>														
Drip irrigation	DF-F-AF	1	45,901	5,672	54,762	6,767	21.2%	1.58	-37%	58%				
Minimum tillage	DF-F-AF	1	77,000	9,515	19,160	2,368	74.8%	8.73	-89%	773%	1,177,040	1,961,733		
Conservation agriculture	F-AF	1	288,750	35,683	12,695	1,569	50.2%	2.45	-59%	145%	1,633,195	583,284		

\* full time equivalent hired labour

\*\* At least 40% own contribution for investment

HH = household farmer

DF = *dekhan* farmer

F = private farmer

AF = agri-firm / entrepreneur

(Y) Representative of youth enterprises

days/year

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8. It is expected that the Project will directly reach around 75,000 households, for an estimated total 375,000 individuals. These include 11,000 HHs benefitting of loans and training, plus circa 54,000 HHs incremental suppliers of the economic activities of the LEs benefitting of ADMP loans (including about 30,000 smallholder or dekhana farmers involved in horticulture or livestock production), and some 10,000 full time equivalent incremental jobs created by the LEs' incremental economic activities<sup>155</sup>. The Project will have an inclusive approach to outreach, trying to involve all segments of the value chains. The breakdown of outreach by type of beneficiary and from the main intervention is presented in Table 2. The bulk of outreach is represented by: (a) the 1,200 LEs supported under Component 1, which will also benefit of the incremental PFIs' loans financed by the ADMP under Component 2; (b) 4,000-5,000 suppliers benefitting of capacity development provided by the LEs under Component 1 (which may also benefit of incremental credits); (c) 2,475 small-scale farmers/enterprises benefitting of credits generated through the Rural Guarantee Facility; (d) about 1,000 farmers benefitting of the modernization of the tertiary irrigation scheme under Component 3; and (e) about 2,250 smallholder producers attending Farmer Field Schools. Overall, the analysis illustrates the consolidated benefits generated by the Project's three investment components and corresponding seven sub-components (Table 2).

**Table 2. ADMP Estimated Outreach**

Intervention	Target group	Estimated outreach	Notes
<b>Subcomponent 1.1</b>			
<b>Support to LEs</b>	LE Representatives	1,200 (30% women)	(50% double counting with LEs benefitting of Credit Lines provided under sub-comp. 1.2)
<b>Subcomponent 1.2</b>			
<b>Business Support to LEs</b>	LE Representatives	1,200 <i>See 1.1</i>	About 100 sessions with 10-12 LE representatives – Double counting of 1.1 outreach
<b>Support to Mahallas</b>	Mahalla leaders	600	120 sessions with 5 Mahalla leaders
<b>Support to Farmers</b>	Model Farmers and demo plots	320	323 model farms selected for demonstration and improved with ADMP support / technical advise
	Farmers	3,200	an average of 10 producers benefitting and possibly adopting the techniques demonstrated
	FFS members	2,250 (40% women)	90 FFS with 25 DF/HHs farmers each
<b>Support to Veterinary Services</b>	Veterinarians	120	<b>NB.</b> This activity may reach out an <i>additional 11,000 indirect beneficiaries</i> (livestock breeders), through <i>incremental vet services provided.</i>
<b>Support to Women through Women Business Association (WBA)</b>	Women on study tours	24	1 study tour / year for a group of 5 women
	Women on trainings	600	2 batches with 25 women / year for each of the three regional branches
<b>Support to Youth through CCI</b>	Youth on training	600	6 seminars / trainings with 25 youth / year
<b>Support to Aquaculture producers through Uzriba</b>	Producers receiving training / advise	200	6 seminars or trainings per year with 10-15 producers
<b>Support on SPS and Standards + quarantine lab</b>	Agricultural Producers and Value chain actors		<i>At least 10,000 producers and value chain actors may benefit of the support</i>
<b>Knowledge management</b>	Govt Officials	54	Study tours and international events
<b>Subcomponent 2.1</b>			
<b>Rural guarantee facility</b>	Agricultural Producers and Value chain actors	2,475	49.4m US\$ with an average loan of 20,000 US\$
<b>Subcomponent 2.2</b>			
<b>Credit lines for Value Chain Development</b>	Leading Entities	1,200 <i>See 1.1</i>	53m US\$ (excluding taxes) with average 45,000 US\$ loans to LEs
	Workers	10,100	Incremental jobs and full-time equivalent jobs
	Agricultural Producers	54,500 (40% women)	Incremental LEs suppliers (including about 30,000 smallholder or dekhana farmers involved in horticulture or livestock production)
<b>Subcomponent 2.3</b>			
<b>Credit for Youth</b>	Youth VC producers	1,000 (50% women)	10.0m US\$ with average 10,000 US\$ loans
<b>Subcomponent 3.1</b>			

<sup>155</sup> Actually these numbers are higher but a conservative approach for outreach indicators has been adopted by applying a 20% failure factor.

Intervention	Target group	Estimated outreach	Notes
<b>Upgrade of the Irrigation System at tertiary level</b>	Agricultural Producers	1,000	3,500 ha covered with average 3 to 4 ha / farmer-DF
<b>Subcomponent 3.2</b>			
<b>Training to WCA staff</b>	WCA staff	70	14 training courses
<b>Training to district operators</b>	Regional govt officials	30	6 training courses
	<b>TOTAL OUTREACH</b>	<b>75,000 circa</b>	
	<b>Indirect Beneficiaries</b>	<b>21,000 circa</b>	
	<b>TOTAL</b>	<b>86,000 circa</b>	

#### IV. Key Assumptions

9. The parameters for the models are based on information gathered during the two design missions: interactions with farmers and entrepreneurs, information from donor agencies and development partners, the RRA of the ongoing IFAD-funded projects, other IFI funded projects and mission's estimates. In particular, information on labour and input requirements for various operations, capital costs, prevailing wages, yields, farm gate and market prices of commodities, input and farm-to-market transport costs were collected. Conservative assumptions were made both for inputs and outputs, and to take into account possible risks.

10. **Prices.** The adopted numerate for the EFA is the domestic price level expressed in local currency unit. The financial prices for Project inputs and products represent average market prices and were collected in the field during the two design missions (May/June 2017, and August/September 2017). Information on labour requirements for various production models, prevailing wage rates, yields, input use, farm gate and market prices of the products, input prices were collected. Prices used represent estimates of the average seasonal prices and the analysis was carried out using nominal constant prices. A list of prices used in the analysis is available in the EFA excel files (Working Paper 3 in Project File).<sup>156</sup>

11. **Exchange rate.** On September 5th 2017, during the course of the design mission, the Central Bank of Uzbekistan (CBU) ended its policy of administratively supporting the official exchange rate of the UZS to allow it to float freely. The official and black-market exchange rates thus broadly converged, and overnight the UZS experienced overnight a depreciation of about 48%, from the prevailing official rate of 4,210 UZS adopted until the preceding week. The exchange rate was used in the analysis is set at the rate prevailing at the end of the second design mission (12 September 2017) or US\$ 1 = UZS 8,092.<sup>157</sup>

12. **Internal rate of return.** An internal rate of return (IRR) of 14%<sup>158</sup> has been used as a discount rate for the financial analysis to assess the viability and robustness of the investments at farm level. The selection criterion for the IRR is to accept all projects for which the IRR is above the opportunity cost of capital. Using the IRR as the measure, the models' sensitivity to the changes in parameters can be assessed by varying the costs and revenues. The same rate was applied for the social opportunity costs of capital.

13. **Labour.** Family labour has been valued both in financial and economic analysis. It has been assumed that both family labour and hired unskilled labour market price is UZS 30,000 per day, which has been adjusted by local unemployment rates to calculate its economic value.

14. **Land Taxes.** A rate of UZS 19,250 per hectare was applied to the analysis. These correspond to the prevailing rates in the Project areas.

15. More details on production and financial parameters for the models are found in the analysis excel tables in the EFA Project files.

<sup>156</sup> "ADMP FinFEA" and "ADMP-EconFEA" for the financial and economic analyses respectively.

<sup>157</sup> Central Bank of Uzbekistan.

<sup>158</sup> The IRR is a measure of the project's worth that in this case compares the return on the investment with the best alternative use of the funds, i.e. a refinancing rate of the Central Bank of Uzbekistan (latest update 28 June 2017, raised from 9%).

## V. Farm and Rural Enterprise Models

16. **Summary.** The main result of the financial analysis include: (i) a significant increase in gross and net returns from each model compared with and without-project situation: (ii) sufficient benefit/cost ratios illustrating the worthiness of the investments. The respective NPVs range from US\$ 425 to US\$ 41,892, while the IRRs from 15% to 76%, which are comparable to those estimated for similar operations in neighbouring Kyrgyzstan, Tajikistan and South Kazakhstan. The analysis showed that the models are more sensitive to changes in both productivity and price assumptions than they are to variations in investment and operating costs.

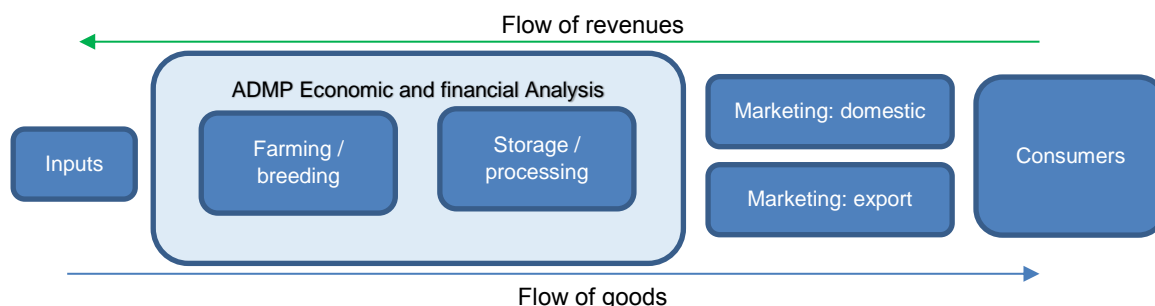
17. **Sensitivity.** While the official rate of inflation is rather stable and no official projection was issued after the depreciation of the UZS, such sudden depreciation is expected to have a twofold effect of increasing the production costs (especially imported ones) but at the same time to increase the competitiveness of the agricultural products in foreign markets hence to partly compensate the cost increase with an increase in nominal output prices. In this respect, the sensitivity analysis shows that all models would remain attractive even if costs increase up to 20%. With regard to **delays in implementation**, the models show a more limited profitability. In particular, delays in the operationalization of the access to finance component are very critical as they represent 85 per cent of the investment. An early identification of the PFIs is recommended not only for the credit lines to LEs and to youth. It is equally important to dedicate sufficient attention to the capacity development interventions, as a way to support and consolidate the farmers and rural entrepreneurs' decisions to diversify from more common wheat and cotton production to more innovative and higher value crops / activities.

18. The indicative models both at farm and enterprises show a positive return on labour (both, hired and family labour). Favourable cash flows from the possible programme financed investments indicated that the improvements in incomes at the farm/ enterprise levels would be sufficient to ensure uptake of the proposed activities. Also, a beneficiary's contribution is likely to translate into a high degree of economic attractiveness.

### General considerations

19. The description of the models follows the above mentioned clustering, including: (i) crop production models, with investments on modern irrigation or improved technologies; (ii) livestock production models, with investment in herd, equipment, and land preparation (for aquaculture); (iii) storage and processing enterprises, with investment in infrastructures; and (iv) demonstration models for technological progress and efficiency gains. The chart in Figure 1 provides an overview of how ADMP's EFA is positioned in the value chains in which it operates.

**Figure 1. Focus of ADMP EFA in the value chain context**



20. Through technologies and knowledge dissemination, including on entrepreneurial skills and value chain analysis, as well as through the co-financed PFIs' credit lines, the ADMP is going to support household farmers, *dekhan* farmers, private farmers and agri-firms in diversifying their

cropping pattern from a prevailing and environmentally unsustainable cotton and wheat production.<sup>159</sup> The credit lines will enhance the producers and processors' capacities to invest, diversify, and expand their businesses and improve the efficiency of the value chains. All models used in the EFA include the use of a loan at prevailing market conditions in the project area and from the potential PFIs, with a 12 per cent interest rate and a three to five year duration (in some cases with one-year grace period).<sup>160</sup>

### Crop production models

21. All models presented below are calculated under the assumption of a trend towards diversification from wheat production. Main investments are represented by drip irrigation or other high efficiency technologies, grafted trees for the establishment of orchards, processing machineries, and infrastructures such as tunnel greenhouses, buildings and cold storage facilities. All crop models are based on a 1 Ha production plot, scaled up to match the size of land of the potential beneficiaries. The main benefits and outcomes of the investments are summarized below, while the aggregation for the entire Project is based on a potential demand for loans (summarized later, in Section VI of this Appendix (VI. Aggregation of ADMP benefit streams)).

22. **Diversification: from Wheat to Tomato - 1 ha.** The main increase in costs is due to the investment in drip irrigation and to raised operating costs, such as improved seeds, adequate quantities of fertilizers, and mechanized services. The prevailing yield of an irrigated wheat in the Without Project (WoP) scenario corresponds to the lower middle productivity (about 5 Tonnes per hectare). For the With Project scenario the tomato yield corresponds to the upper middle average yield of tomato (about 20 T/ha).

Returns to labour	
Returns to HH labour	362,434
Discount rate	14.0%
NPV @ 0.14	47,583,922
IRR	48.5%
NPVb	310,612,249
NPVc	188,959,789
B/C ratio	1.64
Switching values Benefits	-39%
Switching values Costs	64%

Operating costs amount UZS 22.7 million (about US\$ 2,800), and net incremental benefits compared to the without project scenario are UZS 16.7 million (US\$ 2,100) at full implementation, from the fourth year onwards. The model presents positive returns. The cash-flow over the period of twenty years, discounted at 14%, produces a NPV of UZS 47.6 million UZS (US\$ 5,900) with a FIRR of 48.5%. Every dollar invested the activity generates a US\$ 0.64 of extra worth (B/C ratio equal to 1.64).

23. **Diversification: from Wheat to Orchard (apple / vegetable intercropping) - 1 ha.** Orchards represent a significant portion of the agricultural land and one of the highest potential for expansion and value addition in Fergana Valley. With modern cultivation techniques, systematic and effective spraying and proper mechanization in harvesting and post-harvest handling, orchards can be very profitable and can be planted even in relatively hilly areas (e.g. Namangan Region) which are not suitable to other cropping production. The establishment of an apple orchard over a wheat field has been selected as representative model for the analysis. Considering that the production reaches its maturity after four to six years, an intercropping with vegetables (onion) has been factored in for the first years. In the WoP scenario, the wheat yield is about 5 T/ha, corresponding to the lower side of average wheat yield in Fergana Valley. The WP scenario includes a three year potato production (6 T/ha) and apple production from the third year on reaching maturity on year 8 (15 T/ha). The substantial specific investment is represented by the grafted trees, by land preparation, and by the drip irrigation

Returns to labour	800,483
Returns to HH labour	2,401,448
Discount rate	14.0%
NPV @ 0.14	39,258,740
IRR	19.2%
NPVb	267,506,838
NPVc	158,359,988
B/C ratio	1.69
Switching values Benefits	-41%
Switching values Costs	69%

<sup>159</sup> Appendix 1 contains references and contextual elements on the inefficient use of water for cotton and wheat compared to vegetable and orchard production.

<sup>160</sup> Official inflation rate is 5.7 per cent, but the unofficial rate is estimated to be between 9 and 10%, with a very low real interest rate.

equipment. The amount of the investment in the first four years is UZS 104.2 million (US\$ 12,900). The operating costs represent UZS 6.1 million (US\$ 750). When the production reaches its peak, during the eight year, the net incremental benefits are as much as UZS 43.3 million (US\$ 5,350). The NPV is UZS 39.3 million (US\$ 4,850), the FIRR is 19.2% and the B/C ratio 1.69.

**24. Diversification: From Wheat to Orchard (Vineyard / vgt intercropping) - 1 ha.**

This model is a slight variation of the previous, with grape production instead of apple (with maturity on year 7, producing 15 T of grapes per ha), which also has a significant potential for processing. The investments are similar to the apple orchard establishment, for a total amount of UZS 126.0 million (US\$ 15,600). The operating costs amount UZS 6.7 million (US\$ 850), and net incremental benefits compared to the without project scenario are UZS 87.6 million (US\$ 10,800) at full implementation. The cash-flow over the period of twenty years, discounted at 14%, produces a NPV of UZS 253.05 million (US\$ 31,450) with a FIRR of 48.7%, and the B/C ratio equal to 2.80.

Returns to labour	1,637,097
Returns to HH labour	4,911,290
Discount rate	14.0%
NPV @ 0.14	254,453,137
IRR	48.7%
NPVb	504,361,467
NPVc	180,020,219
B/C ratio	2.80
Switching values Benefits	-64%
Switching values Costs	180%

**Livestock production models**

25. The models presented below, including small ruminants, rabbit breeding, and aquaculture, were calculated under the assumption of diversification of economic activities from the prevailing ones. Small ruminants breeding predominantly carried out by household and *dekhan* farmers in their backyard. However, the analysis takes also into account the expansion of a relatively more sizeable production herd. Basis for these are smaller breeding units. For rabbit breeding, a relatively new and promising activity, driven by the domestic demand of large urban centres, the analysis considered a conversion from small ruminant production, as the locals for the ruminants shed can easily be converted into sheds for rabbits. In the two models of aquaculture, the extensive production in ponds is considered as a conversion from a no longer productive wheat field. While for the indoor intensive aquaculture (in tanks), again the comparison was with a small ruminant breeding activity. The investment are quite specific as described below, including infrastructures (sheds and others) or specific equipment (water filters, oxygenation machineries, etc.). All investments are aimed to increase the turnover and the business. As for the crop section, the generalization of the benefits for the entire Project was carried out based on a potential demand for loans summarized later (Section VI. Aggregation of ADMP benefit streams).

**26. Sheep/Goat - Dekhan Farmers / Household**

**Farmers: from 5 to 20 heads.** The programme will support farmers willing to undertake enhanced husbandry approaches for sheep or goat fattening activities and small scale domestic dairy production. The activity is carried out at individual level in the backyard of a *dekhan* farm or household. Conservative technical parameters about herd development (e.g. fertility rate, adult and kid mortality, live-weight etc.) have been

sourced out from consultation with technical experts, farmers or from national statistics. The model presents a dynamic scenario for the WP scenario, and depicts the effects of better nutrition and management practices jointly with access to vaccination and drugs translated in an improvement of about 10% in some parameters such as fertility, live weight per lamb and milk production per goat (see table below for livestock parameters). The investment consists mainly of a livestock shed and of five incremental heads (three in the first year and the other two in the second and third year), and represent

Returns to labour	84,643
Returns to HH labour	22,081
Discount rate	14.0%
NPV @ 0.14	3,437,747
IRR	38.6%
NPVb	56,598,171
NPVc	45,521,603
B/C ratio	1.24
Switching values Benefits	-20%
Switching values Costs	24%

Returns to labour	129,410
Returns to HH labour	225,061
Discount rate	14.0%
NPV @ 0.14	38,537,428
IRR	50.3%
NPVb	477,995,627
NPVc	357,804,926
B/C ratio	1.34
Switching values Benefits	-25%
Switching values Costs	34%



investment represents some UZS 5.4 million (US\$ 670). The operational costs before financing are UZS 6.4 million (US\$ 800), the net benefits UZS 2.5 million (US\$ 300) and the net incremental benefits UZS 1.4 million (or about US\$ 200). After financing, the NPV is 3.4 m UZS (US\$ 400) and the IRR 29%.

#### PARAMETERS AND ASSUMPTIONS

	Unit	WOP	WP		
			1	2	3
<b>Production parameters and costs</b>					
Fertility	%	120%	130%	130%	130%
Mortality rate	%	7%	7%	6%	5%
Culling rate	%	50%	50%	50%	50%
Milk production	litres/year/ewe	110	120	120	120
Live weight per lamb	per head	30	32	33	35

27. **Sheep/Goat – Private farmers / Agri-firms: from 50 to 175 heads.** Based on parameters similar to the previous model, this production unit is however for larger scale entrepreneurs. The value of the investment (mostly consisting of an increment of 125 small ruminants, their shed and other equipment) is about UZS 44.8 million (US\$ 5,500). The NPV is UZS 38.5 million (US\$ 4,800), the IRR 50.3% and the B/C ratio 1.34.

28. **From small ruminants to rabbit breeding.** Rabbit is showing an increasing demand on the market of urban centres and its breeding is starting to be pioneered also by households and *dekhan* farmers.

The model represents the establishment of a small breeding centre for the sale of meat and breeding rabbits. The model compares its profitability with the one of small ruminant breeding, for the relatively easy conversion of the spaces in the household/ *dekhan* farmer's backyard (herd parameters are summarized in the table below). The investment is represented by

Returns to labour	-
Returns to HH labour	65,643
Discount rate	14.0%
NPV @ 0.14	15,506,326
IRR	41.4%
NPVb	77,167,924
NPVc	37,056,607
B/C ratio	2.08
Switching values Benefits	-52%
Switching values Costs	108%

the shed and rabbits and it amounts to some UZS 13.4 million (US\$ 1,700). The operational costs are quite significant, mostly consisting of feed, vaccinations and labour, for UZS 5.1 million (US\$ 630) per cycle. The rapid reproduction of the rabbits allows to carry out three cycles per year, for a net benefits of UZS 7.1 million (US\$ 900) and net incremental benefits of about UZS 4.5 million (US\$ 560). Such high turnover and the relatively limited investment make the activity quite attractive. The NPV is at UZS 15.5 million (US\$ 1,900) and the IRR is 41.4%.

Rabbit growers parameters	Unit	WP
<b>Capital (initial herd)</b>		
Adult Females	no	10
Adult Males	no	2
<b>Performance (per year)</b>		
Adult Survival Rate	%	90
Grower Survival Rate	%	90
Adult Culled	%	45
Sex Ratio (female to male in hatched batch)	%	50
Kids Production per Adult Female/Days	%	5
Mortality Adult	%	10
<b>Rabbit Grower and Adult Production</b>		
Total newborn Rabbits	no	45
Newborn Rabbits Required for Herd Replacement	no	27

29. **Catfish production: pond and intensive-indoor.** Fish demand is increasing in the country, not only from urban areas. Aquaculture has always been a profitable activity, but the practice on a small scale is a relatively new activity. For the ADMP, the analysis assumes two types of small scale aquaculture production (catfish): (a) pond extensive aquaculture (each of an average size of 0.2 ha), replacing no longer productive wheat cultivation; and (b) indoor intensive production, replacing small ruminant production in the backyard. The productivity and investments of the two models are quite different, but the product and the marketing are similar, as fish is either transported live in water tanks to the market, or sold / consumed in hotel restaurants and catering activities.

- **Outdoor pond aquaculture:** Investment include civil works to establish / rehabilitate a pond, some material and equipment (oxygen generator), and amount UZS 35.0 million or about US\$ 4,300). Fingerlings, feed, electricity and labour are the main operating costs (UZS 46.0 million or US\$ 5,700). Net benefits generated by pond catfish aquaculture in 0.2 ha are about UZS 15.0 million (US\$ 1,860), NPV UZS 42.1 million (US\$ 5,200), and IRR 46.5%.

POND AQUACULTURE	
Returns to labour	82,308.85
Returns to HH labour	
Discount rate	14.0%
NPV @ 0.14	42,126,816
IRR	46.5%
NPVb	413,728,786
NPVc	340,371,052
B/C ratio	1.22
Switching values Benefits	-18%
Switching values Costs	22%

- **Indoor intensive aquaculture** is carried out on a much smaller volume of water, and higher density of fingerlings. It requires the establishment of a hermetic shed or room (indoor), one or more tanks of 5 m<sup>3</sup>, the heating system (pipes, boiler, pumps) to keep the 6-month cycle running twice a year, and water filters. The operating costs are similar to the open field pond aquaculture, including fingerlings, feed, labour (household). The capital cost is about UZS 35.6 million (US\$ 4,400), and operating costs are about UZS 30.5 million (US\$ 3,700). Net benefits generated by pond catfish aquaculture in one tank of 5 m<sup>3</sup> are about UZS 13.5 million (US\$ 1,700), NPV UZS 32.4 million (US\$ 4,000), and IRR 36.0%.

INDOOR AQUACULTURE	
Returns to labour	
Returns to HH labour	445,394
Discount rate	14.0%
NPV @ 0.14	32,396,896
IRR	36.0%
NPVb	293,381,364
NPVc	244,166,394
B/C ratio	1.20
Switching values Benefits	-17%
Switching values Costs	20%

Small scale catfish aquaculture	Pond	Intensive
Surface / Volume	100 m <sup>2</sup>	5.0 m <sup>3</sup>
Density (fries / m <sup>2</sup> )	4.5 / m <sup>2</sup>	240 / m <sup>3</sup>
Number of fry purchased	450	1,200
Losses during transportation (5%)	23	60
Number of fries	428	1,140
Losses during rearing (10%)	42.8	171
Number of fish at harvest	385	969
Average weight of the fry (g)	15	15
Average weight of fish at harvest (g)	600	1,000
Initial biomass purchased (kg)	6.75	18
Initial stocked biomass (kg)	6.4	17
Final biomass harvested (kg)	231	969
Biomass sold (Kg) - 80%	185	775
Biomass energy consumption (Kg) - 20%	46.17	194
Food Requirement	494	2,094
Nutritional Quotient	2.2	2.2
Nutritional Quotient (improved fish feed)	1.3	1.5

## Processing units

30. The analysis has considered three representative types of entrepreneurial activities with potential economic expansion in the project area. These comprise: (i) expansion of slaughter house, mostly benefitting households and *dehkan* farmers breeding small ruminants or cattle; (ii) two models for warehouses for vegetable and fruits (one for 80 tons the other with 1,000 tons capacity), with high benefits depending on the cold storage facility allowing phasing of sales and accordingly price gains, export opportunities and income gains for all actors along the value chain.

31. **Slaughterhouse.** This activity is mostly associated with households and *dehkan* farmers breeding livestock (small ruminants as well as cattle) on a small scale. The slaughterhouse is established by an investment including refurbishing or constructing the building and procuring the appropriate tools, and operating costs mostly consisting of expendable equipment, electricity and water, transport and labour. The activity is compared to a smaller scale similar activity. The investment will cost some UZS 40.0 million (US\$ 4,900) and the operating costs will amount some UZS 43,3 million (US\$ 5,300). The net benefits at full scale production (after year 3) will be UZS 31.5 million (US\$ 3,900), and the activity will generate a NPV of UZS 118.8 million (US\$ 14,700), with 72% IRR and B/C ratio of 1.31.

Returns to labour	7,881,727.16
Returns to HH labour	
Discount rate	14.0%
NPV @ 0.14	118,844,593
IRR	72%
NPVb	443,302,935
NPVc	323,127,543
B/C ratio	1.37
Switching values Benefits	-27%
Switching values Costs	37%

32. **Warehouse.** The warehouse with a cold storage facility represent a key asset for the Project area's economic expansion of horticulture (fruits and vegetable). The immediate opportunity derives from the capacity to phase the sales, catching opportunities for premium prices off season and increasing the quality and durability of products throughout the year. The investment consists of refrigerated warehouse facility, technological equipment (pallets, boxes, containers, etc.), other minor equipment, quality technical assistance and training and laboratory equipment. The relatively high value of the investment represents a barrier at entry, but the increased access to credit generated by the Project may encourage the expansion of this business. Two types of investment have been modeled for the ADMP, a storage facility with 80 tons capacity, and a larger facility with 1,000 tons capacity. Such models represent a challenge for the project (due to the high risk), but also a tremendous opportunity for employment generation and above all for the downstream linkages along the horticulture value chain.

- **Fruit Cold Storage Facility (capacity to keep 80 ton).**

The overall amount of the investment is about UZS 271.5 million (US\$ 33,500), which will be funded by a loan with standard conditions of 12% interest and 5 years duration with first year grace on principal repayment. The working capital on the first years (on year 1 the requirement is about UZS 600.0 million, or US\$ 76,000), will be funded with a short term loan with 12% interest. The short-term loan will decrease in the years 2 to 4 as the liquidity of the operation increases. The warehouse employs four people and is expected to serve at least 50 incremental suppliers. The NPV of the operation is UZS 139.1 million (US\$ 17,200) and the IRR 16.9%.

Fruit Cold Storage Facility (80 ton capacity)	
Returns to labour	34,764,063
Returns to HH labour	
Discount rate	14.0%
NPV @ 0.14	95,311,515
IRR	16.9%
NPVb	6,565,144,213
NPVc	6,444,249,144
B/C ratio	1.02
Switching values Benefits	-2%
Switching values Costs	2%

- **Fruit Cold Storage Facility (capacity to keep 1,000 ton).**

The larger warehouse is established through a similar investment, amounting some UZS 3.9 billion

(US\$ 481,500), funded through a loan with similar condition to the previous model (LE's

Fruit Cold Storage Facility (1,000 ton capacity)	
Returns to labour	40,698,560
Returns to HH labour	
Discount rate	14.0%
NPV @ 0.14	338,992,745
IRR	14.8%
NPVb	82,504,872,839
NPVc	80,696,208,855
B/C ratio	1.02
Switching values Benefits	-2%
Switching values Costs	2%



contribution may be higher than the usual 20%).<sup>161</sup> The large warehouse employs up to 80 people at full scale capacity, and is expected to serve some 250 incremental suppliers from the Project area. The NPV of the operation is UZS 338.9 million (US\$ 41,900) and the IRR 14.8%.

### Production models for youth

33. The analysis has considered two additional models representative of entrepreneurial activities carried out by young women and men. Such activities are considered more attractive for youth as they require a more limited capital, as well as collateral and land available for the investment to be profitable.

34. **From open backyard gardening to Tunnel Greenhouse Vegetable production (0.1 ha).** Vegetables have a robust market demand and are cropped in a significant portion of irrigated cultivable land. Tomato production has been taken as a representative model for vegetables. The operating costs amount UZS 0.6 million (or US\$ 70), mostly for hybrid seeds. The investment cost represented by plastic film, single tunnel, aluminum and iron and seedlings amounts to about UZS 35.8 million (US\$ 4,450), reasonably affordable for a small loan, especially considering the rapid expected repayment capacity. Before loan repayment, the benefits of the greenhouse generate a net revenue of UZS 19.9 million in the second year, or UZS 8.8 million net incremental benefits compared to open field tomato gardening (US\$ 1,000). The NPV is UZS 7.2 million (US\$ 890). The FIRR is 23.2% and the B/C ratio is 1.10. The return to HH labour is US\$ 64 per day.

<b>Returns to labour</b>	
<b>Returns to HH labour</b>	521,927
<b>Discount rate</b>	14.0%
<b>NPV @ 0.14</b>	<b>7,201,836</b>
<b>IRR</b>	<b>23.2%</b>
<b>NPVb</b>	79,016,504
<b>NPVc</b>	71,814,668
<b>B/C ratio</b>	1.10
<b>Switching values Benefits</b>	-9%
<b>Switching values Costs</b>	10%

35. **Beekeeping.** The major producers of honey and bee families in Uzbekistan are *dehkan* farms that produced and commercialized, in 2016, about 80% and 75% of the total volumes, respectively. The investment includes 50 bee families, 60 beehives, a machinery for small scale processing, clothes and other equipment (UZS 48.0 m – US\$ 6,000). The production outputs include honey and wax, as well as bee families. The operational costs of UZS 12.5 m (US\$ 1,500) and incremental net benefits are UZS 10.0 m (US\$ 1,200) The NPV is UZS 15.9 million (US\$ 1,900). The IRR is 29.8% and the B/C ratio is 1.12.

<b>Returns to labour</b>	41,718
<b>Returns to HH labour</b>	166,870
<b>Discount rate</b>	14.0%
<b>NPV @ 0.14</b>	<b>15,905,448</b>
<b>IRR</b>	<b>29.8%</b>
<b>NPVb</b>	149,684,075
<b>NPVc</b>	133,778,628
<b>B/C ratio</b>	1.12
<b>Switching values Benefits</b>	-11%
<b>Switching values Costs</b>	12%

### Demonstrations and innovations

36. Through Sub-component 1.2, the Project will promote the development of innovative, demand-driven production and processing technologies through participatory on-farm/enterprise applied research and technology demonstration. Three models have been selected as possible representative innovations demonstrated: drip irrigation, minimum tillage applied to a wheat-potato crop rotation, and conservation agriculture with no-tillage and wheat and chickpea rotation. the latter two options, combining minimized soil disturbance and in case of CA increased soil cover and crop diversification, are highly beneficial for the environment, for soil fertility and for resilience to reduced water.

37. **Drip irrigation scheme.** The main benefits of this option are of economic nature. In order to estimate the benefits, the analysis assumes the installation of a drip irrigation scheme over an orchard area (grapes) of about 100 ha. The drip irrigation system allows a higher efficiency in

<b>Returns to labour</b>	
<b>Returns to HH labour</b>	
<b>Discount rate</b>	14.0%
<b>NPV @ 0.14</b>	<b>5,466,245,409</b>
<b>IRR</b>	<b>21.2%</b>
<b>NPVb</b>	50,436,146,707
<b>NPVc</b>	31,911,118,542
<b>B/C ratio</b>	1.58
<b>Switching values Benefits</b>	-37%
<b>Switching values Costs</b>	58%

<sup>161</sup> Depending on the threshold for ADMP-financed PFIs' loans.

terms of quality (price premium 10%) and quantity (production per ha increases by 30%). The investment costs are represented by the pipelines over channel to direct water to fields and the drip irrigation equipment in the orchards. The total amount of the investment is UZS 4.6 billion (corresponding to US\$ 567,200). The IRR of the operation is 21.2%, the B/C is 1.58 and the NPV is 1UZS 5.5 billion (US\$ 675,500).

38. **Minimum tillage - wheat and chickpea rotation.** This model intends to capture the possible benefits of conservation agriculture. The model casts minimum tillage planting technique and the diversification of cropping system by alternating crops and using no-till planters. The land is expected to increase its organic fertility, which will lead to higher yields and reduction of the use of fertilizers from the third year on. Compared to conservation agriculture, minimum tillage is more affordable.

39. **Conservation agriculture with rotation of wheat and potato.** The demonstration would promote crop rotation with conservation agriculture as a highly beneficial agricultural practice.

Minimum Tillage		Conservation Agriculture	
Returns to labour	1,177,040	Returns to labour	1,633,195
Returns to HH labour	1,961,733	Returns to HH labour	583,284
Discount rate	14.0%	Discount rate	14.0%
NPV @ 0.14	19,159,987	NPV @ 0.14	12,694,993
IRR	74.8%	IRR	50.2%
NPVb	124,250,684	NPVb	171,880,052
NPVc	14,229,160	NPVc	70,185,670
B/C ratio	8.73	B/C ratio	2.45
Switching values Benefits	-89%	Switching values Benefits	-59%
Switching values Costs	773%	Switching values Costs	145%

## VI. Aggregation of ADMP benefit streams

40. The analysis has developed a scenario based on the prevailing trends in the credit lines for agriculture (and food value chains) in the Project area. Table 3 presents an assumption of the economic activities for which farmers and entrepreneurs could borrow from PFIs supported by the ADMP.

**Table 3. Involved Leading Entities**

Large Leading Entities:	Production Units	Y1	Y2	Y3*	Y4	Y5
Warehouses (80T)	1	15	35	40	25	20
Warehouses (1000T)	1	10	25	30	35	10
Slaughterhouses	10	30	60	80	60	25
<b>Sub-total Large Leading Entities</b>		<b>55</b>	<b>120</b>	<b>150</b>	<b>120</b>	<b>55</b>
Small-Medium Leading Entities:	Production Units	Y1	Y2	Y3*	Y4	Y5
Wheat to Vegetable (tomato)	15	15	20	10	10	10
Wheat to Orchard (apple)	18	20	40	40	20	20
Wheat to Orchard (vineyard)	15	20	40	40	20	20
Garden tomato to GH Tomato	20	15	30	10	10	10
Sheep/Goat: from 5 to 20 heads	10	10	20	10	10	10
Sheep/Goat: from 50 to 175 heads	5	5	10	5	5	5
Rabbit breeding (vs to Sheep/Goat)	20	30	70	70	50	30
Catfish aquaculture (extensive)	15	40	50	60	40	30
Catfish aquaculture (intensive)	20	20	40	40	20	20
<b>Sub-total Medium-Small Leading Entities</b>		<b>175</b>	<b>320</b>	<b>285</b>	<b>185</b>	<b>155</b>
Youth credit line (number of borrowers:	Production Units	Y1	Y2	Y3*	Y4	Y5
Garden tomato to GH Tomato	2	20	50	50	50	50
Sheep/Goat: from 5 to 20 heads	3	20	50	50	50	50
Beekeeping	2	20	50	50	50	50
Catfish aquaculture (intensive)	5	40	65	80	65	65
<b>Sub-total borrowers Youth credit lines</b>		<b>100</b>	<b>215</b>	<b>230</b>	<b>215</b>	<b>215</b>

41. The tables above reflect the distribution of loans between different types of borrowers. Regarding the credit lines under Sub-component 2.2, the analysis takes into account an estimated 1,450 LEs. Such number depends on the size of the individual loans and the available amount from the dedicated credit lines. The distribution of loans between types of enterprises is summarized in Table 4 and reflects the capital need resulting from the production / processing / storage models elaborated for the EFA. For conservative reasons, this EFA takes into account that only about 80% of the LEs are successful in developing their investment. Hence the total amount of funds disbursed to credit is lower than the actual amount available under the Project's Sub-component 2.2. Regarding Sub-component 2.3 – the youth dedicated credit lines, the analysis takes into account the economic activities of about 1,000 borrowers. For the same sake of conservative results, the total amount of the loans disbursed represents some 80% of the amount actually available, reflecting the expected adoption or success rate envisaged for the Project.

**Table 4. Overview of possible ADMP loans**

	Number of borrowers	Loan amount (m UZS)	Loan amount (m US\$)	% of credit lines
<b>TOT Large LEs</b>	500	242,392	\$ 30.0	27%
<b>TOT Small/Medium LEs</b>	<b>1,120</b>	<b>489,705</b>	\$ 60.5	54%
<b>TOT Youth credit lines</b>	975	<b>76,545</b>	\$ 9.5	79%
<b>TOTAL</b>			<b>\$ 99.93</b>	

42. The details of the corresponding amount of loans disbursed to the LEs depends on the investment amounts described in the production models. The production units have been adjusted from the size used for modelling (e.g. 1 ha) to a size of the business corresponding to the prevailing production system (e.g. farms can be as large as between 1 and 20 ha). Table 5 summarizes the amount of loans delivered to the involved LEs. The amounts are distributed along the implementation years according to the budget delivery estimates (Appendix 9). The only difference is represented by the merging of year 3 and year 4 credit line allocation, based on the rapid disbursement rate of similar projects under the RRA, and under the assumption that the second IFAD loan will be available already in the second year of the Project (still conservative assumption).

**Table 5. Total Amount of Credit Lines**

Loans (m US\$)	Y1	Y2	Y3*	Y4	Y5
<b>Large loans (m US\$):</b>					
Warehouses (80T)	301.96	704.57	805.23	503.27	402.61
Warehouses (1000T)	2,407.28	6,018.19	7,221.83	8,425.47	2,407.28
Slaughterhouses	88.98	177.95	237.27	177.95	74.15
<b>Sub-total Large Leading Entities</b>	<b>2,798.21</b>	<b>6,900.72</b>	<b>8,264.33</b>	<b>9,106.69</b>	<b>2,884.04</b>
<b>Small-Medium Loans (m US\$):</b>					
Wheat to Vegetable (tomato)	675.00	900.00	450.00	450.00	450.00
Wheat to Orchard (apple)	2,352.70	4,705.39	4,705.39	2,352.70	2,352.70
Wheat to Orchard (vineyard)	2,208.86	4,417.72	4,417.72	2,208.86	2,208.86
Garden tomato to GH Tomato	796.88	1,593.77	531.26	531.26	531.26
Sheep/Goat: from 5 to 20 heads	40.04	80.08	40.04	40.04	40.04
Sheep/Goat: from 50 to 175 heads	83.04	166.09	83.04	83.04	83.04
Rabbit breeding (vs Sheep/Goat)	597.91	1,395.13	1,395.13	996.52	597.91
Catfish aquaculture (extensive)	1,557.07	1,946.34	2,335.60	1,557.07	1,167.80
Catfish aquaculture (intensive)	1,055.84	2,111.68	2,111.68	1,055.84	1,055.84
<b>Sub-total Medium-Small Loans</b>	<b>9,367.35</b>	<b>17,316.20</b>	<b>16,069.87</b>	<b>9,275.33</b>	<b>8,487.45</b>
<b>TOTAL amount of successful loans sub-comp 2.2 (90.5 m US\$)</b>	<b>12,165.56</b>	<b>24,216.91</b>	<b>24,334.20</b>	<b>18,382.02</b>	<b>11,371.49</b>
<b>Youth credit line (m US\$):</b>					
Garden tomato to GH Tomato	141.67	354.17	354.17	354.17	354.17
Sheep/Goat: from 5 to 20 heads	21.35	53.39	53.39	53.39	53.39

Loans (m US\$)	Y1	Y2	Y3*	Y4	Y5
Beekeeping	192.98	482.44	482.44	482.44	482.44
Catfish aquaculture (intensive)	703.89	1,143.83	1,407.79	1,143.83	1,143.83
<b>TOTAL amount of successful loans Sub-comp 2.3 (9.5 m US\$)</b>	<b>1,059.89</b>	<b>2,033.83</b>	<b>2,297.79</b>	<b>2,033.83</b>	<b>2,033.83</b>

43. **Cost aggregation.** While aggregating the costs, the stream does not include the replacement value of the equipment and goods procured within the individual production / processing units, as this is already included in the stream of net incremental benefits of the individual models. Recurrent costs related to the investments are bared by the beneficiaries and are already included in the underlying production models. The following paragraphs show the net incremental benefits in the three targeted regions.

44. **Benefits aggregation.** The aggregation of benefits is done following the models described in the latter Section. Such results are already resized compared to the available loan amount under Sub-component 2.2 under the assumption that only 80% of the businesses supported by the ADMP are successful (conservative assumption also in line with the results framework). The stream of net incremental benefits of the LEs by type is summarized in Table 6, while the aggregated overview of the entire ADMP is presented in Table 7.

45. **Employment generation and downstream benefits along the value chain.** By expanding the activities in the area, the project is indirectly also contributing to enhance the employment levels in the area as well as in strengthening the linkages between actors along the same value chains. On one end, concerning incremental labour required by the activities, the Project is expected to generate at least 12,000 full-time equivalent jobs. Table 8 summarizes how, under the assumed expansion of the selected production / processing models, the LEs will be able to reach and overcome that target. The incremental capacity of processing and storage units, on the other end, is expected to generate commercial linkages with an incremental 59,000 suppliers (Table 9).

**Table 6. Net incremental benefits stream of Leading Entities by type – in million US\$**

Values in million US\$	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10-20
<b>Large Leading Entities:</b>										
Warehouses (80T)	-364	-171	-12	1	151	258	258	258	258	258
Warehouses (1,000T)	-4,419	-1,115	202	277	1,365	2,012	2,012	1,942	1,942	1,942
Slaughterhouses	-1,779	423	1,161	1,161	1,161	1,161	1,161	1,161	1,161	-322
<b>Small-Medium Leading Entities:</b>										
Wheat to Vegetable (tomato)	-391	195	330	465	465	465	465	465	465	465
Wheat to Orchard (apple)	-1,934	-694	26	177	497	1,277	1,667	1,928	1,928	1,927
Wheat to Orchard (vineyard)	-1,777	-48	854	1,713	2,483	2,867	3,250	3,250	3,250	1,300
Garden tomato to GH Tomato	225	-217	-94	-90	-90	303	303	303	303	-1,025
Sheep/Goat: from 5 to 20 heads	38	-12	-3	1	2	17	17	17	17	17
Sheep/Goat: from 50 to 175 heads	82	-26	-6	8	11	42	42	42	42	42
Rabbit breeding (vs to Sheep/Goat)	136	-161	337	337	337	337	337	337	337	337
Catfish aquaculture (extensive)	-1,143	383	1,115	1,115	1,115	-1,480	1,115	1,115	1,115	1,115
Catfish aquaculture (intensive)	-612	380	667	667	667	-1,093	667	667	667	667
<b>Youth-led enterprises:</b>										
Garden tomato to GH Tomato	-206	24	41	41	41	41	41	41	41	-314
Sheep/Goat: from 5 to 20 heads	21	-5	-1	0	1	7	7	7	7	7
Beekeeping	6	45	49	49	49	49	49	49	49	-123
Catfish aquaculture (intensive)	-130	190	334	334	334	-546	334	334	334	334

**Table 7. ADMP financial net incremental benefits – in million US\$**

		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10-20
<b>Sub-component 2.2</b>											
<b>Aggregated Incremental Benefits (m US\$)</b>	(80% adoption)	-11.94	-24.99	-27.24	-13.58	13.63	39.06	55.05	67.37	78.62	77.85
<b>NPV (14%, m US\$)</b>	<b>\$ 164.49</b>										
<b>IRR</b>	<b>37%</b>										
<b>Sub-component 2.2</b>											
<b>Aggregated Incremental Benefits (m US\$)</b>	(80% adoption)	-0.31	-0.41	0.18	1.07	1.89	2.44	2.21	1.90	2.25	1.74
<b>NPV (14%, m US\$)</b>	<b>\$ 7.23</b>										
<b>IRR</b>	<b>92%</b>										
<b>Sub-component 2.2</b>											
<b>Aggregated Incremental Benefits (m US\$)</b>	(80% adoption)	-	-11.57	-8.68	0.41	0.41	9.49	14.03	18.57	18.57	18.57
<b>NPV (14%, m US\$)</b>	<b>\$ 38.95</b>										
<b>IRR</b>	<b>35%</b>										
<b>ADMP COSTS</b>											
<b>Aggregated Incremental Costs (m US\$)</b>		17.54	51.14	39.14	27.10	21.19	1.24	0.35	0.35	0.35	0.35
<b>NPV (14%, m US\$)</b>	<b>\$ 109.74</b>										
<b>ADMP Aggregated Net Incremental Benefits (m US\$)</b>											
		-29.79	-88.10	-74.87	-39.21	-5.26	49.75	70.94	87.49	99.08	97.81
<b>NPV (14%, m US\$)</b>	<b>\$ 100.94</b>										
<b>IRR</b>	<b>20.5%</b>										

**Table 8. Full-time equivalent jobs created**

	Y1	Y2	Y3	Y4	Y5	Y6	TOTAL Incremental Jobs
Wheat to Vegetable (tomato)	19	25	13	13	13	-	82
Wheat to Orchard (apple)	46	92	92	46	46	-	321
Wheat to Orchard (vineyard)	38	76	76	38	38	-	267
Garden tomato to GH Tomato	-	-	-	-	-	-	-
Sheep/Goat: from 5 to 20 heads	6	12	6	6	6	-	35
Sheep/Goat: from 50 to 175 heads	14	28	14	14	14	-	85
Rabbit breeding (compared to Sheep/Goat)	-	-	-	-	-	-	-
Catfish aquaculture (extensive)	624	780	936	624	468	-	3,432
Catfish aquaculture (intensive)	-	-	-	-	-	-	-
<b>Sub-total full time equivalent jobs created (SM LE)</b>	<b>747</b>	<b>1,013</b>	<b>1,136</b>	<b>740</b>	<b>584</b>	<b>-</b>	<b>4,221</b>
Warehouses (80T)	48	112	128	80	64	-	432
Warehouses (1000T)	320	800	960	1,120	320	-	3,520
Slaughterhouses	480	960	1,280	960	400	-	4,080
<b>Sub-total full time equivalent jobs created (Large LE)</b>	<b>848</b>	<b>1,872</b>	<b>2,368</b>	<b>2,160</b>	<b>784</b>	<b>-</b>	<b>8,032</b>
<b>Total Full time equivalent jobs created</b>	<b>1,595</b>	<b>2,885</b>	<b>3,504</b>	<b>2,900</b>	<b>1,368</b>	<b>-</b>	<b>12,253</b>

**Table 9. Incremental suppliers**

	Y1	Y2	Y3	Y4	Y5	Y6	TOTAL Incremental Suppliers
Warehouses (80T) -fruits and vegetables producers	750	1,750	2,000	1,250	1,000	-	6,750
Warehouses (1000T) - fruits and vegetable producers	2,500	6,250	7,500	8,750	2,500	-	27,500
Slaughterhouses - goat/sheep rearing	3,000	6,000	8,000	6,000	2,500	-	25,500
<b>Total incremental suppliers</b>	<b>6,250</b>	<b>14,000</b>	<b>17,500</b>	<b>16,000</b>	<b>6,000</b>	<b>-</b>	<b>59,750</b>

## VII. Economic Analysis

46. The objectives of the economic analysis are: (i) to examine the overall Project viability, and (ii) to assess the Project's impact and the overall economic rate of return; and (iii) to perform sensitivity analyses upon risks and variables affecting Project's results.

47. **Key Assumptions.** Production and activity models considered in the financial analysis are used as building blocks for determining the viability of the whole Project, once addressing for market distortion and opportunity costs for inputs and outputs. The economic analysis of the Project hinges on the following assumptions: (i) Project life has been assumed at 20 years in light of investments lifecycle; (ii) Project inputs and outputs are valued at their economic parity prices estimated upon international prices as reported by the World Bank commodity outlook (April 2017), and on the basis of custom duties and taxes rates at the time of design; (iii) the financial discount rate used for the analysis is 14%, the same as the refinancing rate of the Central Bank of Uzbekistan (latest update 28 June 2017), and the same rate is used for the economic discount; (iv) the opportunity cost of rural labour was estimated considering the long term official unemployment rate (8.9%), as such the shadow wage rate factor is equal to 0.92, or a daily wage of UZS 27,540 (US\$ 3.5); (v) the shadow exchange rate factor (SERF) is 1.03 and the shadow exchange rate (SER), estimated upon international trade data, is equal to UZS 8,309 per US\$ 1.0.

48. **Project Economic Costs.** The incremental costs in economic prices have been calculated by the removal of price contingencies and taxes/duties. There are no recurrent and replacement costs after the ADMP completion. O&M costs have been counted in the calculation of the net incremental benefits of the value chain models. The total economic cost of the project amounts to about US\$ 132.0 million (equivalent to approximately UZS 1,068.2 billion).

49. **Benefits Estimation.** The illustrative models described above have been used for the calculation of the overall benefit stream of the various investment models above, on the basis of economic prices. The models' specific benefits are then aggregated following the inclusion phasing foreseen for targeted leading entities and other value chain stakeholders.

### Results of the Analysis

50. **Overall Estimated Return of the Proposed Project.** The Project is a technical and economically viable investment to the economy as a whole. The Project Economic NPV of the net benefit stream, discounted at 14%, is US\$ 34.4 million (UZS 278.1 million) producing an economic rate of return of 16.5%, for the base case scenario. The summary of economic analysis is presented in Table 11. The overview of the economic and financial analysis is presented in Figure 2 and Figure 3.

51. **Sensitivity Analysis.** Sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits. The results are presented in Table 10. A fall in total Project benefits by 10% would not affect the profitability of the operation. Instead, a fall by 20% would reduce the EIRR to 13.5% (11.8% in case of 30% drop in benefits). An increase in total costs does not seem to affect much the profitability of the Project, which is encouraging in a context where inflation may be significant in the first years of implementation of the project. Under the assumption of no increase of project costs, the operation is profitable even with a one-year delay in implementation and realization of benefits (ERR equals 15.0%). For longer delays, the project shows negative returns. This is the case for a two-year delay (ERR 13.6%), or 1 year delay accompanied by a 20% increase of costs (ERR 13.7%). Special attention is recommended for a solid overview of the timely project implementation.



**Table 10. Sensitivity Analysis**

	EIRR	No delay	1 Yr delay	2 Yrs delay
<b>Base scenario</b>		<b>16.5%</b>	<b>15.0%</b>	<b>13.6%</b>
Costs overrun by 10%		15.8%	14.3%	12.9%
Costs overrun by 20%		15.1%	13.7%	12.3%

SENSITIVITY ANALYSIS			
	$\Delta\%$	Link with the risk matrix	FIRR
<b>Base scenario</b>			16.5%
Project benefits	-10%	Combination of risks affecting output prices, productivity and adoption rates	15.0%
Project benefits	-20%		13.5%
Project benefits	-30%		11.8%
Project costs	10%	Increase of goods costs	15.8%
Project costs	20%		15.1%
1 year lag in ben.		Risks affecting adoption rates and low implementation capacity	15.0%
2 years lag in ben.			13.6%

52. **Risk Analysis.** The main risk of the Project is associated with the delayed identification of PFIs and subsequent disbursement of the credit lines, which represent 85% of the Project's investment. Broader risks such as foreign markets' conditions for horticulture and food value chains also represent an external risk for the Project, as the increased production capacity will only partly mitigated by the increased storage capacity, which cannot solve drastic drops in demand (e.g., from drop of imports from Kazakhstan or Russian Federation, the two main markets for export). The quality of production will have to increase rapidly in order to gain place in diverse foreign markets. Investing in capacity development and technical assistance is strategic for the region, and it is important that the project takes serious monitoring over LEs supposed to deliver training and coaching to suppliers. The Project has a tremendous opportunity also for the environmental sustainability of water through more efficient irrigation systems, accompanying the farming units in selecting crops with higher comparative advantages than cotton and wheat. Other risks of the project include lack of capacity in implementing agencies and beneficiaries to effectively participate in Project may result in the delay of realization of benefits. Despite various benefits were not accounted for in the analysis (such as part of the investment in solar agro-meteorological stations), the Project has a tiny margin of error and requires an attentive implementation.

53. An important source of risk, whose magnitude is unforeseeable at project design stage, is the development of the currency rate vis-à-vis the major international currencies. The recent devaluation by 48% of the official exchange rate of the UZS (during the second design mission) is expected to generate an increase of prices in local currency of the imported goods. These include most of the capital goods including equipment, machineries but also improved breeds of livestock, seeds and seedlings / saplings possibly imported by the borrowers, and energy (fuel). On the other hand, the devaluation will certainly favour export of agri-food commodities. Such increased potential market and possible gains in prices compared to the local prices may represent an additional opportunity for the sector and compensate the increase of costs.

**Table 11. ADMP - ECONOMIC Net Benefit stream**

<i>Values in '000 USD</i>	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10 / 20
<b>Net Inc. Benefits</b>	- 26,736	- 78,753	- 71,616	- 43,594	- 15,692	31,270	49,992	64,842	75,618	74,338
<b>Incr. Costs</b>	14,693	42,819	32,592	23,193	17,479	955	303	303	303	303
<b>Cash Flow</b>	<b>- 41,429</b>	<b>- 121,572</b>	<b>- 104,209</b>	<b>- 66,787</b>	<b>- 33,171</b>	<b>30,315</b>	<b>49,689</b>	<b>64,539</b>	<b>75,315</b>	<b>74,035</b>

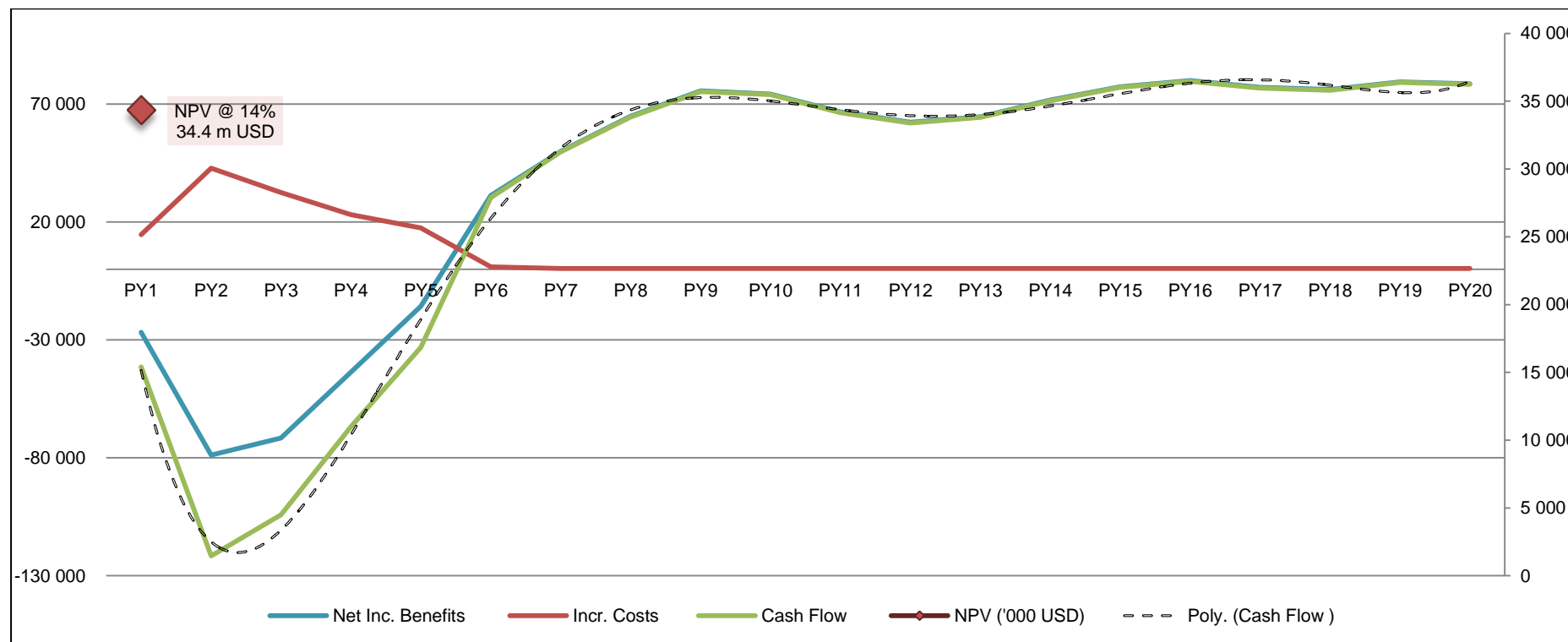
Figure 2. Overview of ADMP's Financial and Economic Analysis

UZBEKISTAN - AGRICULTURE DIVERSIFICATION AND MODERNIZATION PROJECT (ADMP)												
F I N A N C I A L Y S I S	CATEGORY	Estimated Investment Costs (US\$)			Annual Net Benefits (US\$)			Annual Inc. net benefits per 1US\$ of Inv.	IRR (%)	NPV (US\$)	Return to labour, US\$/day	Return to family labour,
		ADMP	Beneficiary Contrib.	Total	Without Project	W. Project - Full Dvt	Incremental					
	<b>Large Leading Entities:</b>											
	Warehouses (80T)	20,131	13,420	33,551		17,184	17,184	0.5	17%	11,778	19.5	0.0
	Warehouses (1000T)	288,873	192,582	481,455		201,176	201,176	0.4	15%	41,892	22.9	0.0
	Slaughterhouses	2,966	1,977	4,943	25	3,896	3,871	0.8	72%	14,686	4.4	0.0
	<b>Small-Medium Leading Entities:</b>											
	Wheat to Vegetable (tomato)	3,000	2,000	5,000	1,304	3,371	2,067	0.4	48%	5,880	0.0	43.8
	Wheat to Orchard (apple)	6,535	4,357	10,892	1,304	6,658	5,354	0.5	19%	4,851	98.9	296.8
	Wheat to Orchard (vineyard)	7,363	4,909	12,271	1,304	12,138	10,834	0.9	49%	31,445	202.3	606.9
	(Y) Garden tomato to GH Tomato	2,656	1,771	4,427	3,181	4,192	1,011	0.2	23%	890	0.0	64.5
	(Y) Sheep/Goat: from 5 to 20 heads	400	267	667	143	314	171	0.3	39%	425	10.5	2.7
	Sheep/Goat: from 50 to 175 heads	3,322	2,214	5,536	1,524	3,198	1,675	0.3	50%	4,762	16.0	27.8
	(Y) Rabbit breeding (compared to Sheep/Goat)	997	664	1,661	314	876	562	0.3	76%	1,890	0.0	8.1
	Catfish aquaculture (extensive)	2,595	1,730	4,325	583	2,441	1,858	0.4	46%	5,206	10.2	0.0
	(Y) Catfish aquaculture (intensive)	2,640	1,760	4,399	314	1,981	1,668	0.4	36%	4,004	0.0	55.0
	(Y) Beekeeping	3,618	2,412	6,031		1,237	1,237	0.2	30%	1,966	5.2	20.6
	<b>Demonstration</b>											
	Drip irrigation	5,672	NA/Demo	5,672	5,900	11,207	5,306	0.9	21%	6,767		
	Minimum tillage (30ha)	9,515	NA/Demo	9,515	47,707	65,455	17,748	1.9	75%	71,032		
	Conservation agriculture (30ha)	35,683	NA/Demo	35,683	47,295	60,548	13,253	0.4	50%	47,064		

(Y) = Attractive for youth due to limited capital / collateral / land required for the investment

PROJECT COSTS AND INDICATORS FOR LOGFRAME			
<b>TOTAL Costs</b>	<b>156.98 m US\$</b>	<b>PMU</b>	<b>2.1 m US\$</b>
<b>Base Costs</b>	<b>156.19 m US\$</b>		
<b>Beneficiaries (direct)</b>	<b>378,250 people</b>	75,650 HHs	<b>Adoption rates 80%</b>
<b>Beneficiaries (including indirect)</b>	<b>483,250 people</b>	96,650 HHs	
<b>Cost per beneficiary</b>	<b>325 US\$/person</b>		
	<b>1,624 US\$/HHs</b>		
Components and Cost (USD million)		Outcomes and Indicators	
<u>Component 1. Inclusive Value Chains Development</u> m USD <u>12.40</u>	Enhanced capacity for sustainable and efficient performance of targeted stakeholder	At least 70% supported smallholder household / dehkan farmers engaged in partnerships/ commercial agreements with LEs At least 80% small scale producers report adoption of new / improved technologies / practices	
<u>Component 2. Inclusive Rural Finance</u> m USD <u>134.50</u>	Productivity and efficiency along targeted smallholder-inclusive value chains increased	Participating Financial Institutions' Portfolio at risk > 30 days are below 5% At least 1,200 LE value chain stakeholders in the project areas accessing financial services	
<u>Component 3. Climate-resilient Rural Infrastructure</u> m USD <u>7.96</u>	Improved farmland productivity resulting from modernized irrigation infrastructure	At least 1,000 farms (including also HH/DFs) reporting increase in production as a result of the adoption of modern irrigation techniques. At least 3,500 hectares under upgraded irrigation	

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## Appendix 12: Compliance with IFAD policies

### A. Adherence to IFAD policies

1. The ADMP is closely aligned with IFAD's strategic framework 2016 – 2025, in particular Strategic Objective 2: Increase poor rural people's benefits from market participation, and the associated areas of thematic focus: (i) diversified rural enterprise and employment opportunities, (ii) rural investment environment, and (iii) rural producers' organizations.
2. The Project is also aligned with: (a) the new IFAD Policy for Environment and Natural Resource Management, which proposes greater attention to risk and resilience in order to manage environmental and natural resource-related shocks, and promotes livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management; and (b) the IFAD Strategy on Climate Change, which is articulated around three objectives: (i) support the innovative approaches in order to assist the small producer (women and men) to increase their resilience to climate change; (ii) assist these small agriculturists to take advantage of available financing and incentives for mitigation; and (iii) promote a documented and more coherent dialogue on climate change, rural development, agriculture, and food security. Similarly, the design of the ADMP is fully compliant with IFAD's policies on: Targeting, Gender Mainstreaming, Rural Finance, Climate Change, etc., and it is fully aware on the new Social, Environmental and Climate Assessment Procedures, and therefore will seek their compliance in Project implementation at operational and field levels.

### B. SECAP Note

#### 1. Major landscape characteristics and issues (social, natural resources, and climate)

##### A. Socio-cultural context

3. Uzbekistan is a land-locked country (total land area: 447,400 km<sup>2</sup>) in Central Asia bordering Kazakhstan, Tajikistan, Kyrgyzstan, Afghanistan and Turkmenistan, with a population of over 31 million. 64% of this total, and 75%<sup>162</sup> of the lower income population, live in rural areas. Of these, almost two thirds make their living from agriculture, with many facing threats to productivity due to landscape degradation. Agriculture fulfils 90% of domestic demand for agriculture products and 70% of domestic trade. However, the contribution of agriculture to the national GDP declined from 30% in 2000 to currently around 17.5%. The agricultural sector provides employment for some 15 million people, of which many are under-employed.
4. A lower middle-income country, Uzbekistan's 8.2% GDP growth rate over the last decade was the highest in the Europe and Central Asia Region (ECA) and one of the eight highest in the world<sup>163</sup>. Rapid economic growth and the implementation of new employment Projects in Uzbekistan led to an increase of 14% in employment from 2005 to 2010, with over 3.8 million new jobs created during this period<sup>164</sup>. The poverty rate was reduced from 27.5%<sup>165</sup> to 14.1% from 2001 to 2014, and to 13.5% in 2015. Rural poverty also decreased, from 30.5% in 2001 to 17.3% in 2013. In the Fergana Valley (ADMP project area – and specifically Fergana, Andijan and Namangan regions) however, poverty remains higher than average in eight out of twelve regions, including Namangan. The Andijan, Fergana and Namangan regions have a high population density and register, particularly in Namangan, the second lowest country GDP per capita<sup>166</sup>.
5. The ratio of female to male labour force participation is 64%. Despite their strong presence in the agriculture sector, women are also poorly represented in Water User Associations (WUAs), the

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<sup>162</sup> <http://www.uz.undp.org/content/uzbekistan/en/home/countryinfo/>

<sup>163</sup> The World Bank Group Report (May, 2016) Country Partnership Framework for Uzbekistan for the Period FY16-FY20.

<sup>164</sup> Uzbekistan Country Strategy paper 2014-2020, [www.ec.europa.eu](http://www.ec.europa.eu)

<sup>165</sup> Millennium Development Goals Report. Uzbekistan 2015.

<sup>166</sup> Country Partnership Framework FY 16- FY 20, World Bank.

primary community structure for water management issues, and for resolving disputes that arise between the managers of irrigation systems and water users<sup>167</sup>. The Uzbek population is very young - 31.6% are younger than 14 years old, and over two-thirds is under 24 years old<sup>168</sup>. An annual population growth of 1.36% produces a relatively rapidly growing young population, and a corresponding need for rapid employment creation that is not being fully absorbed domestically.

6. More recently, there has been an increase in investments into intensive horticultural production, both of fruit and vegetables. The Government established clear priorities for development of this sub-sector, as per the Presidential Decree No. 2460 of 29/12/2015. Support for this initiative has mobilized public (including major donors) and private investment to shift away from (now) lower value wheat and cotton, and into horticulture, mainly with an export focus. Over 25,000 hectares of new fruit orchards have been established in the past four years. The value of exports of fruit and vegetables now constitutes over 50% of agricultural export earnings. There have also been improvements in farm incomes, and productivity of land, water and personnel employed as a result.

7. Uzbekistan has three types of farms: Dekhan, Private and Shirkat. The IFAD ADMP target group focuses on smallholder farmers, including Dekhan farms. In Uzbekistan, Dekhan farms<sup>169</sup>, with 13% of irrigated arable land, produce 63% of gross agricultural output<sup>170</sup>. Private farms produce all of the cotton and most of the wheat, and in recent years, an increasing proportion of some fruit and other products. The freedom for private farms to choose to produce different viable products is being increased, in line with Government policy of diversification.

8. With regards to nutrition, Uzbekistan has the highest regional incidence of anaemia (52%) among women of reproductive age, and a high percentage of children (70%) aged 12-23 months are iron-deficient. Around 19% of children under 5 are stunted and 4% are underweight.

## **B. Natural resources and NRM**

9. Three zones are distinguished in Uzbekistan: steppe and semi-arid (mainly central and western parts); the fertile valleys (including the Fergana Valley) that skirt the Amudarya and Syrdarya rivers; and the mountainous areas in the east with peaks of about 4 500 m above sea level (Tien Shan and Gissaro-Alay mountain ranges)<sup>171</sup>. Almost 85% of Uzbekistan's terrain consists of desert and semi-desert plains, with extensive mountain systems flanking the deserts. Soils in Uzbekistan are characterized by low levels of fertility.

10. The Amudarya and Syrdarya drainage basins almost entirely make up the region's surface water resources. The majority of the runoff from these rivers and their tributaries is generated in their upper reaches in Tajikistan or Kyrgyzstan. A large number of small artificial water bodies and reservoirs have been created mainly for water management purposes. The only large natural body of water in Uzbekistan is the Aral Sea, but it has been severely affected by irrigated land development and unsustainable water management practices, leading to massive shrinking – from 68,000 km<sup>2</sup> in the 1970's to approximately 9,400 km<sup>2</sup> in 2015.

11. Available water resources in the country are estimated at 67 billion m<sup>3</sup> per year, from which 55.1 billion m<sup>3</sup> comes from surface waters and 7.8 billion m<sup>3</sup> from groundwater. Uzbekistan is the primary consumer of water in the region, with irrigation accounting for approximately 92% of surface water withdrawal - agricultural production is almost 90% dependent upon irrigation. Increased evaporation coupled with rising temperatures will lead to water loss in zones that rely heavily on irrigation.

12. Forests occupy 8.17 million hectares of land, with desert woodlands accounting for 78% of the territory of Uzbekistan (10% of the Fergana Valley area is forest and woods/bushes). As a result of the

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<sup>167</sup> ADB. Uzbekistan Country Gender Assessment, 2014.

<sup>168</sup> UNFPA, Country Project Document for Uzbekistan (2010-2015).

<sup>169</sup> The number of *dekhan* farms have doubled over the period 2000-14, according to the State Statistics Committee.

<sup>170</sup> State Statistics Committee of the Republic of Uzbekistan, 2010.

<sup>171</sup> FAO AQUASTAT, revised in 2014.



generally arid climate, forests in Uzbekistan have low productivity - their main functions are linked to provision of ecosystem services including watershed protection, wind and dust shelterbelts. Non-wood forest products and services - nuts, fruit, berries, mushrooms and medicinal plants, hunting, grazing and beekeeping – greatly contribute to livelihoods in rural areas. Uzbekistan has a rich flora, and is one of the world's major centres of origin of wild ancestors of cultivated plants (important for the genetic improvement of existing cultivars).

13. A large area of Uzbekistan is used for agriculture, with natural pastures occupying 40% of the country, and rain-fed and irrigated cropland accounting for 12%. The major crops are cotton, wheat, maize, alfalfa, barley, sorghum, rice, mulberry for silkworm culture, vegetables, melons, and fruit trees. Most agricultural areas are within the Amudarya and Syrdarya basins, and these rivers provide approximately 70% of irrigation water. In the country, salinization and soil erosion are two major issues affecting at least half of agricultural land and lead to increasingly reduced yields and the abandonment of croplands.

### **C. Climate**

14. Uzbekistan has a dry continental climate, with low precipitation, hot summers and cold winters. Summer temperatures can reach over 40°C and fall as low as -40°C in the northern regions; average winter temperatures however are about -2°C. In the south the winter is mild, but sometimes with considerable frosts. Climate is characterized by low precipitation (70–100 mm per year) in the plains of the north-west part and up to 1,200 mm in mountainous regions. Over 70% of precipitation falls between autumn and spring, with a maximum in March and April.

15. The Fergana Valley is characterized by sharp continental climate, hot, dry summers and relatively mild winters. Annual precipitation is 180-330 mm; evapotranspiration is 3-4 times higher than annual precipitation. More specifically to the Project area: the Andijan region is characterized by a typically continental climate and significant differences between summer and winter temperatures. Winter weather is relatively moderate, due to the fact that mountain chains prevent cold air masses from entering the region. Average annual precipitation is 200-250 mm. The Fergana region, located in the southern part of the Fergana Valley, includes plains (79% of the area) and mountains and foothill regions (21%). The climate is continental with mild winters and hot summers. Average annual precipitation in the eastern part of Fergana is 170 mm, whereas in the foothills, annual precipitation reaches 270 mm. Namangan, in the north eastern part of the Fergana Valley, has a continental climate with hot, dry summers and by moderate, damp winters. Surrounded by mountain ranges, the eastern part of Namangan has a mild climate, with a rainfall of 600 mm, creating favourable conditions for rainfed agriculture. In the western part rainfall is much less, there are few rivers, and hilly and mountainous land with sparse vegetation is unsuitable for agriculture<sup>172</sup>.

### **D. Key Issues**

16. The main environmental challenges in Uzbekistan are: freshwater resource depletion and deterioration of water quality; desertification, salinization and erosion; and climate change. The Amudarya and Syrdarya rivers (primary rivers in the Fergana Valley) are used intensively for irrigated agriculture. Widespread irrigation and the use of poor, water-inefficient and wasting technologies have significantly impacted highly sensitive desert ecosystems. About 26% of croplands and 17% of rangelands have been affected by degradation during the last three decades, leading to substantial loss of productivity. Climate change projections forecast higher temperatures, changes in precipitation regimes, and more severe and prolonged droughts with decreases in water availability. All these environmental impacts will also be felt at the socio-economic level, including to human health.

17. Desertification, soil erosion and salinization, and habitat loss, as a result of unsustainable agriculture and irrigation practices, remain key issues for Uzbekistan's ecosystems and biodiversity. In addition to a loss of habitat and biodiversity, the reduction of forests and other vegetation decreases

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<sup>172</sup> World Bank. Horticulture Development Project. Environmental Management Framework. 24 February, 2014.

absorption of carbon dioxide, thus accelerating climate change impacts<sup>173</sup>. The Fergana Valley is, however, considered to be the fertile area of Uzbekistan, and although 28% of irrigated land in Fergana valley suffers from moderate to high salinity levels, resulting in a 20%-30% drop in crop yield, according to discussions with the First Deputy Hekmat of Namangan region, soil salinization and fertility is not a major issue (5-6% of all irrigated area in the region has poor soil quality). Furthermore, the World Bank Environmental Assessment for the Fergana Valley Water Recourses Management Project, Phase II (FVWRMP-II) – which is in the same project area as the ADMP, says that “due to natural conditions the soils of project area are not subject to salinity”. Having said that, land statistics for the Namangan region show that average soil fertility, comparing 1999 to 2011, has remained the same (at 57 “soil fertility points” – Grade VI out of X).

18. Uzbekistan is the primary consumer of water in the region, with irrigation accounting for 92% of surface water withdrawal and its agricultural production almost 90% dependent upon irrigation. The irrigation network is extensive, but investments in infrastructure maintenance have decreased in recent years. Few incentives exist for the application of water-saving technologies. Water costs are covered by an overall land tax and are not tied to use of inputs. In the Fergana Valley, water supply in the middle reach of the Syrdarya River mostly depends on flow release by the upstream riparian countries (Kyrgyz Republic and Tajikistan). The deteriorated irrigation and drainage infrastructure, together with issues related to poor water management and water use inefficiency, cause environmental degradation and declines in agricultural productivity – potentially resulting in social tensions<sup>174</sup>.

19. Uzbekistan is threatened by climate change. Projections forecast increasing average temperatures, changes in precipitation regimes, and more severe and prolonged droughts with decreases in water availability, which will in turn increase water demand and decrease water availability<sup>175</sup>. A changing climate will also increase the periodicity and intensity of extreme and hazardous hydro-meteorological phenomena, namely droughts, heat waves, heavy rains, mudflows, floods and avalanches. Higher temperatures and water deficit are also poised to cause vegetation dieback, higher fire risk and insect outbreak, the intensification of species invasiveness, and water quality and quantity reduction. Higher temperatures can also have a detrimental effect on livestock health (thermal stress during the summer months).

20. A climate vulnerability (of natural resources and economic sectors) assessment was conducted for the (recently released) Third National Communication (TNC) of Uzbekistan under the UNFCCC. The TNC identified technical and technological adaptation measures to address projected climate changes, which include: improvement of water use; introduction of water saving technologies, rational use of land and water resources, rehabilitation/upgrading irrigation and drainage infrastructure; crop diversification and selection of new crop varieties; introduction of new innovative agro-technologies; agricultural afforestation; improvement and rational use of pastures; and new pedigree animal breeds. With regards to technologies for mitigation and adaptation, the TNC identifies the following to be used in the agriculture sector: technologies for efficient water use; technologies for efficient land use; and agro-afforestation measures.

21. Finally, smallholder rural families have limited access to productive assets, good infrastructure, energy, modern technology and knowledge, impacting on how they cope with natural disasters and climate change challenges.

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<sup>173</sup> Second National Communication of the Republic of Uzbekistan to the UNFCCC.

<sup>174</sup> World Bank and The Ministry of Agriculture and Water Resources Project Implementation Unit for Water Infrastructure (PIU-WI). Fergana Valley Water Resources Management Phase II - Project Environmental Assessment and Management Plan. Final Report. 28 March, 2016.

<sup>175</sup> Third National Communication (TNC) of Uzbekistan under the UNFCCC

## **2. Potential Project's social, environmental, and climate change impacts and risks**

### **A. Key potential impacts**

22. Project activities focus on three components: (i) Inclusive Value Chains Development; (ii) Inclusive Rural Finance; and (iii) Climate-resilient Rural Infrastructure. The Project is not expected to generate negative social impacts; it is expected to enhance rural family incomes and reduce the number of low-income families, contributing to improved livelihoods. Direct environmental or climate change impacts from the Project are negligible and can be improved or avoided through advice on and implementation of sustainable agricultural management practices. Addressing climate change can be improved through Project activities, in particular through adaptation opportunities such as through Component 3 (climate-resilient rural infrastructure).

23. Depending on the type of diversification and/or modernization activities the entrepreneurs/borrowers will undertake, impacts can vary. For example, currently, the use of agro-chemicals in the region is low, however this could have the potential to change because of increased economic liquidity. In the case of agro-industries, these would be modernized, but more agro-industries could cause increased pollution. The potential impacts of aquaculture (e.g. on effluents) should also be noted.

### **B. Climate change and adaptation**

24. In Uzbekistan, climate change is already exacerbating water scarcity and land degradation. The TNC found that Namangan was listed as medium vulnerable, whereas Andijan and Fergana are at low vulnerability. At the country level, however, warming rates in the country exceed the average rate (at 0.27°C/10 years) observed at the global level. The Fergana meteorological station observed one of the highest increases in annual air temperatures (1.6°C). An increased number of days of "heat waves" can be expected in the Fergana Valley. Also according to the same report, the risks of mudflows and floods are greatest in lower valleys, piedmont and low mountain areas – especially in Fergana Valley (including Andijan and Fergana), where 44% of mudflows were registered, with an almost annual occurrence already in Namangan region. According to projections for piedmont and mountainous parts of Uzbekistan, increases in precipitation will increase the risk of mudflows (over four-fold, in 2080).

25. There is significant scope for the ADMP to address climate change and climate change adaptation issues in the Fergana Valley area of the three Project regions (Andijan, Fergana and Namangan). Here, some of the existing irrigation infrastructure is deteriorated and is characterized by high-energy consumption and low-efficiency. Water resources in the Fergana Valley are limited and are unequally available in different districts, resulting in some of the lands located near the main canals and water sources to be over-irrigated, while lands located further away do not receive reliable water supply. This is due to deteriorated infrastructure, issues in water distribution, and widely used furrow irrigation one of the most water consuming type of irrigation). Water saving technologies, the reduction of water losses and improved water management are strategies for climate-resilient irrigation infrastructure.

### **C. Environmental and social category (A, B, C)**

26. The ADMP is classified as category "B". No significant environmental or social impacts are expected to arise from Project activities; the Project targets IFAD vulnerable groups including women and youth, and supporting diversification will contribute to diversified income generating activities but also diversified diets. No major infrastructure works are part of the Project; agricultural diversification and modernization activities, linked to agri-business development and to agricultural production systems, could have potential impacts but these are negligible. Based on the type of diversification/modernization activity, environmental assessments and compliance with national legislation will be practice. Climate-resilient rural infrastructure will incur positive environmental benefits.

27. Environment-related strategies in Uzbekistan that are relevant to agriculture include the: Uzbekistan Systemic Country Diagnostic (SCD); National Strategy on Sustainable Development (1999); National Environmental Action Plan (1998); Law on Water and Water Use (1993); Concept of Sustainable Water Supply of the Regions of the Republic of Uzbekistan (2002); Strategy for the Development of the Irrigation and Drainage Sector (2001) and the National Project on the Development of Irrigation for 2000–2005; National Waste Management Strategy and Action Plan for 2008–2017; Project of Actions on Nature Protection for 2013–2017; National Action Project to Combat Desertification; and the Land Code (1998). The main environmental body of Uzbekistan is the State Committee for Nature Protection, responsible for the protection of the environment and the use of natural resources. The Interdepartmental Council of the Cabinet of Ministers has the overall responsibility of coordinating the country's national mitigation actions and those related to the UNFCCC commitments; the Centre of Hydrometeorology (Uzhydromet) is an important institution with regards to climate change. The Ministry of Agriculture and Water Resources is responsible for the formulation and promotion of policies and strategies related to the development of agriculture and water resources across Uzbekistan. Uzbekistan is party to the three major Multilateral Environmental Agreements (the Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC) and the Convention to Combat Desertification (CCD).

#### **D. Climate risk category (High, Moderate, Low)**

28. Climate change is projected to lead to higher temperatures (2-3°C over the next 50 years) and changes in precipitation, leading to yield reductions of 20–50% by 2050 for nearly all crops. It is projected that there will be a severe water shortfall of between 12-51% in the Fergana Valley by 2040. Water availability will increasingly become a significant issue because of climate change, including projected increases in dry years and drought, including in the Syrdarya and Amudarya river basins. This is linked to ensuring improved water management in irrigated areas, for adaptation measures in light of climate change impacts. In addition, the Government has identified land restoration and climate change adaptation priorities for the agriculture sector, by enhancing institutional and technical capacity to reduce production risks related to climate change.

29. While climate change is an issue for Uzbekistan, an analysis of climate risk in the context of this Project categorizes it at moderate. The Project will seek to mitigate climate-related risks, but also adapt to climate-related environmental events, by improving (tertiary) water management systems<sup>176</sup>, and governance at the levels of Water Users Associations (WUAs) and the Basin Authorities of Irrigation Systems (BAIS). Also, by contributing to the diversification of the rural economy the Project will increase the resilience of rural communities to the effects of climate change.

### **3. Recommended features of Project design and implementation**

#### **A. Mitigation measures**

30. In the Project area, it was noted that parts of the water delivery system for irrigation requires upgrading and renewal. Most of the land is irrigated through surface or furrow irrigation procedures, which are cheap to install and operate, but have low water-use efficiency. It was also noted, during field visits in Namangan region, that some of the drip irrigation systems were in disrepair, due in part to the poor material quality of the drip irrigation pieces. Considering the aspect of diversification into horticulture crops, and therefore the need for reliable water availability through irrigation, the ADMP will focus on upgrading and renovating the tertiary irrigation network operated by Water User Associations (WUAs), which will also address challenges of drought and reduced water availability predicted due to climate change. Drip irrigation, in particular, is a water-saving and efficient (both environmentally and economically) system of irrigation, where water from deep wells will maintain or improve groundwater.

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<sup>176</sup> Linkages can be created with the World Bank Fergana Valley Water Recourses Management Project, Phase II (FVWRMP-II).

31. Pesticide use in horticulture in the Fergana Valley is relatively low, mainly because of the high costs associated with their purchase - however the increasing shift towards horticulture could cause possible increases in pesticide use (also, climate change could contribute to increased incidences of insect outbreaks). Having said that, quality control of agricultural products in both domestic and foreign markets is a factor that influences the low use of external chemical inputs, and more use of biological methods of plant protection. Information on Integrated Pest Management (IPM) approaches can be promoted. The promotion of other sustainable agricultural practices can be further encouraged, for example the benefits of intercropping with nitrogen-fixating legumes, and other crops to be used as fodder for livestock.

32. Depending on the agri-businesses (processing, poultry, fisheries), there could be some potential environmental impacts from for example waste emissions, discharges or transport. As applicable, these would be mitigated through applying relevant national standards. In the case of sericulture and beekeeping, no mitigation measures are needed if not incorporating aspects of sustainable agricultural practices (for potentially increased mulberry planting); improved hive management and quality control for honey production can be supported through technical advice.

#### **B. Multi-benefit approaches**

33. The IFAD-funded Horticultural Support Project was declared effective in December 2013 and the Dairy Value Chains Development Project became effective in April 2017. Both these projects are relatively recent and in different project areas than the ADMP, but there has been evidence that modestly-scaled IFAD interventions to pioneer new methods, approaches and engagement tools have already served as a model for other investments by Government, development partners and the private sector. The World Bank, the Asian Development Bank and the European Commission, with the Government of Uzbekistan, who are currently implementing or planning to implement major interventions in the horticultural and dairy sub-sectors, evidence this. The ADMP will continue in this direction, and cultivate linkages with on-going projects/initiatives, as applicable.

#### **C. Incentives for good practices**

34. Incentives for good practices are supported through the ADMP. Improved irrigation infrastructure will contribute to increased productivity (e.g. drip irrigation has the potential to double vegetable and fruit yields) and thus household income, but also to channel water into those zones where irrigation is not reliable during the dry season. The provisions for accessing rural finance is an incentive to adhere to sustainable operations in modernized agro-businesses and diversified production systems. Quality control of agricultural products in both domestic and foreign markets is already an incentive for the low use of external chemical inputs, but perhaps the feasibility of subscribing to certification schemes could also be investigated.

#### **D. Participatory processes**

35. Participatory processes are key aspect of the ADMP. Specifically, participatory processes underpin activities that support ADMP's key principles, namely targeting and inclusiveness, demand-driven value chain approach and institutional strengthening. For example, facilitating the inclusion of smallholder farmers into modern value chains; clarifying the conditions, needs, and modalities for increased participation of smallholder farmers in modern and market-oriented value chains; analysing the potential in general and that of various players in particular in each step of the value chain; or supporting various institutions involved in the agriculture sector, both public and private.

### **4. Analysis of alternatives**

Not applicable.

### **5. Institutional analysis**

### **A. Institutional framework**

36. The Ministry of Agriculture and Water Resources (MAWR) will have the overall responsibility for management of the Project on behalf of the Government of Uzbekistan. The Rural Restructuring Agency (RRA) will expand its scope and be responsible for overall management, coordination, oversight, monitoring, supervision, procurement and financial management, knowledge management and evaluation of the ADMP through a Project Management Unit (PMU) specifically established for the Project. Field Project activities will be coordinated from a regional Project Implementation Team (PIT) in Namangan, with two Regional Coordinators operating in Andijan and Fergana oblasts, supported by contracted service providers for specific activities. The PMU and PIT would work closely with oblast (regional) and district governments to coordinate activities, and to stimulate learning across government institutions regarding inclusive value chains. If and as applicable, environmental assessments for specific activities will comply with national legislation.

### **B. Capacity building**

37. ADMP's Component 1 has elements of capacity building, and of particular relevance to this SECAP is Sub-component 1.2: Capacity Development for Value Chain Stakeholders, which will provide demand-driven capacity building support to the value chain stakeholders. This would include training to farmers for better agronomic and animal husbandry practices, support to *mahallas* for their facilitation of community mobilization and identification of value chain participating households, advisory services to Leading Entities, and capacity building of veterinary service providers. The Project will also provide capacity building support to the relevant central and regional level departments of the MAWR, selected research institutes (such as the Scientific Research Institute for Livestock Poultry and Fishery) and industry associations or export holding companies (to improve their services to the value chain actors in their respective areas of responsibilities. Gender awareness will be incorporated in each training or capacity building exercise.

### **C. Additional funding**

Not applicable.

## **6. Monitoring and Evaluation**

38. The implementation of ADMP will be guided by the Project Results Framework (PRF). The PRF will be refined during Y1 of implementation, and reviewed at midterm evaluation. If necessary, it will be updated annually as part of the adaptive learning process based on the monitoring of Project implementation. The Rural Restructuring Agency (RRA) will have lead responsibility for the coordination of all M&E activities of the Project. As per IFAD's new Results and Impact Management System (RIMS), the Project will conduct a Project impact assessment at least by estimating contribution as opposed to attribution, based on quantitative repeater surveys combined with interviews to capture qualitative aspects. The ADMP will report on impact in its Project completion report.

## **7. Further information required to complete screening, if any**

39. There is no need for additional information.

## **8. Budgetary resources and schedule**

Not applicable.

## **9. Record of consultations with beneficiaries, civil society, general public etc.**

40. An IFAD mission visited the Republic of Uzbekistan between 9 May and 5 June 2017. Collectively, the mission had meetings and discussions with senior officials of the Ministry of

Agriculture and Water Resources (MAWR), the Ministry of Economics (MOE), the Ministry of Finance (MOF), the State Committee on Investments (SCI), the State Committee on Land Resources, Geodesy, Cartography and Cadastre (SCLRGCC), the State Committee on Environmental Protection (SCEP), the Central Bank of Uzbekistan (CBU), the Rural Restructuring Agency (RRA); public and private banking institutions; scientific-research institutes supporting the agriculture sector; Uzbekbaliksanoat Association, Food Holding Company Uzbekoziqovgat and the Business Women's Association of Uzbekistan (BWAU). The mission visited all 12 districts of Namangan region where the team held discussions with the senior officials of oblast and district governments as well as with some *Mahalla* Committee representatives, regional branches of banking institutions, technical agencies, processors and other agro-enterprises including agro-firms, service providers, and with private and *dehkan* farmers. The mission also met with donors engaged in agriculture development including the Asian Development Bank (ADB), the World Bank, the European Commission, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Finance Corporation (IFC), JICA and USAID-supported Development Alternatives, Inc.





## **Appendix 13: Contents of the Project Life File**

### **A. Project design cycle: key meetings and events**

**IFAD Project ID Number:**

**Project Design and Learning Cycle**

### **B. Project design documents**

#### **C. ADMP working papers**

Working Paper No. 1

**Inclusive Rural Finance**

Working Paper No. 2

**ADMP Cost Tables: Detailed and Summary Cost Tables, Detailed calculation of unit costs**

**ATMP COSTAB File**

Working Paper No. 3

**Economic and Financial Analysis (set of Excel files)**

#### **D. Rapid End Markets Assessment**

Volume I: Small Ruminants

Volume II: Fisheries

Volume III: Apiculture

Volume IV: Sericulture

#### **E. 18-month Procurement Plan (Excel file)**

#### **F. Relevant country strategy and government documents**