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Report No: PAD4479

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

IBRD LOAN

IN THE AMOUNT OF US\$180 MILLION

AND A

IDA CREDIT

IN THE AMOUNT OF US\$20 MILLION

TO THE

REPUBLIC OF UZBEKISTAN

FOR THE

SECOND RURAL ENTERPRISE DEVELOPMENT PROJECT

March 1, 2022

Agriculture and Food Global Practice
Europe and Central Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2022)

Currency Unit = Uzbek Soum

10,804 Soum = US\$1

US\$1.39 = SDR 1

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

AEZ	Agro-Ecological Zone
AFD	Agence Française de Développement
Agency	Agency for the Work of Mahallabay and Entrepreneurship Development
BDS	Business Development Services
CBU	Central Bank of Uzbekistan
CCI	Chamber of Commerce and Industry
CGIAR	Consultative Group for International Agricultural Research
CLIG	Credit Line Investment Guidelines
CPF	Country Partnership Framework
ECA	Europe and Central Asia
EEORW	Enhancing Economic Opportunities for Women Project
ENPV	Economic Net Present Value
ERR	Economic Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standards
FAO	Food and Agriculture Organization
FIRR	Financial Internal Rate of Return
FNPV	Financial Net Present Value
FVREDP	Ferghana Valley Rural Enterprise Development Project
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HDP	Horticulture Development Project
IA	Implementing Agency
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFR	Interim (Un-audited) Financial Reports
INDC	Intended Nationally Determined Contribution
IPF	Investment Project Financing
IWMI	International Water Management Institute
JSDF	Japan Social Development Fund
L2CU	Listening to the Citizens of Uzbekistan
LMP	Labor Management Plan
M&E	Monitoring and Evaluation
MEDPR	Ministry of Economic Development and Poverty Reduction
MFD	Maximizing Finance for Development
MIRR	Modified Internal Rate of Return
MIS	Management Information System
MMFA	Ministry of Mahalla and Family Affairs
MoF	Ministry of Finance
MSME	Micro, Small and Medium Enterprises
OHS	Occupational Health and Safety

PBC	Performance-Based Condition
PCG	Partial Credit Guarantee
PDO	Project Development Objective
PFI	Participating Financial Institution
PIU	Project Implementation Unit
POM	Project Operations Manual
PPSD	Project Procurement Strategy for Development
REDP	Rural Enterprise Development Project
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SMEs	Small and Medium Enterprises
TA	Technical Assistance
WB	World Bank



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Uzbekistan	Second Rural Enterprise Development Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P176017	Investment Project Financing	Substantial

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input checked="" type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
22-Mar-2022	15-Dec-2027
Bank/IFC Collaboration	Joint Level
Yes	Complementary or Interdependent project requiring active coordination

Proposed Development Objective(s)

The project development objective is to support the expansion of rural enterprise activity, investments, and job creation in regions supported by the project.

Components

Component Name	Cost (US\$, millions)
Enterprise Development. Facilitate the establishment and growth of MSMEs through the provision of technical support and facilitation.	20.00
Access to Finance. Address a number of key constraints to access to finance by MSMEs and will introduce two financing instruments: a credit line and partial credit guarantee fund.	175.80
Project Management. Support the implementation, management, monitoring and evaluation of the project.	3.75

Organizations

Borrower:	Ministry of Finance
Implementing Agency:	Agency for the Work of Mallahabay and Entrepreneurship Development, Ministry of Economic Development

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	200.00
Total Financing	200.00
of which IBRD/IDA	200.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	180.00
International Development Association (IDA)	20.00
IDA Credit	20.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Uzbekistan	20.00	0.00	0.00	20.00

National PBA	20.00	0.00	0.00	20.00
Total	20.00	0.00	0.00	20.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2022	2023	2024	2025	2026	2027	2028
Annual	0.00	39.55	40.00	40.00	40.00	30.00	10.00
Cumulative	0.00	39.55	79.55	119.55	159.55	189.55	199.55

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Finance, Competitiveness and Innovation, Social Sustainability and Inclusion

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Moderate
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Moderate

**COMPLIANCE****Policy**

Does the project depart from the CPF in content or in other significant respects?

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Not Currently Relevant
Financial Intermediaries	Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants



Conditions		
Type Effectiveness	Financing source IBRD/IDA	Description The Loan Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Borrower to make withdrawals under it (other than the effectiveness of the Loan Agreement) have been fulfilled.
Type Effectiveness	Financing source IBRD/IDA	Description The Project Operations Manual has been adopted by the Borrower/Recipient in form and substance satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description The Project Implementation Unit has been established within the Agency under terms and conditions satisfactory to the Bank/Association.
Type Disbursement	Financing source IBRD/IDA	Description Under Category 2, unless the Recipient has adopted the Grant Guideline in accordance with Section I.D of Schedule 2 of the Financing Agreement.
Type Disbursement	Financing source IBRD/IDA	Description Under Category 3, the Borrower has adopted the Credit Line Guidelines in accordance with Section I.B of Schedule 2 of the Loan Agreement.
Type Disbursement	Financing source IBRD/IDA	Description Under Category 4(a), the SFSED has adopted the Partial Credit Guarantee Guidelines and has signed the Partial Credit Guarantee Agreement, in accordance with Section I.C of Schedule 2 of the Loan Agreement.
Type Disbursement	Financing source IBRD/IDA	Description Under Category (4) (b), unless the volume of guarantees issued by the SFSED under Part 2 (b) of the Project is equal to or larger than \$29,300,000.

I. STRATEGIC CONTEXT

A. Country Context

1. **Uzbekistan is engaged in an agricultural reform agenda as it moves towards a more market-oriented and inclusive agricultural sector.** Market-oriented reforms were launched with a major decision in September 2017 to remove foreign exchange market controls and unify the official and market exchange rates, initially through a 50 percent devaluation of the Soum against the US dollar. Since then, the Government of Uzbekistan has implemented a wide range of reforms, including an overhaul of the tax system to improve its efficiency and reach; the removal of several price, production, and trade controls; easing of cumbersome bureaucratic processes faced by businesses and citizens alike; lowering of import tariffs and strengthening of trade facilitation to accelerate the World Trade Organization accession process. Economic growth has remained strong at over 5 percent, except in 2020. In 2020, the GDP growth was only 1.6 percent due to the COVID-19 impact on the overall economy. The World Bank forecasts the gross domestic production (GDP) to continue growing around 5 percent (4.8 percent in 2021 and 5.5 percent in 2022), well above the Central Asia's average of 3.7 percent for 2021.¹ Early results of these reforms resulted in widespread public endorsement of the reforms. Data from the 2019 Listening to the Citizens of Uzbekistan (L2CU) survey² shows strong support for the exchange rate unification and the increased private participation and competition.

2. **Robust economic growth, small business development, income from remittances, and an extensive social safety net have driven poverty reduction in recent years.** Official poverty and inequality measures have also fallen sharply. The official poverty rate fell from 27.5 percent in 2001 to 11.4 percent in 2018, and official Gini coefficient by over a quarter between 2003 and 2013 (the last year in which the coefficient estimate was reported). However, the number of people living in poverty (US\$3.2 a day, 2011 purchasing power parity adjusted) has increased during the pandemic to 9 percent of the population (well above the precrisis projection of 7.4 percent in 2020), as the pandemic led to job losses, income reductions, and declining remittances. Nearly 1 million people dropped below the poverty line in 2020. Micro- and small businesses have contributed to poverty reduction in recent years. These entities are estimated to account for 78 percent of total jobs.³ In addition to dispersed benefits of strong economic growth that has been sustained over an extended period, social assistance and remittances have also played an important role in mitigating the poverty situation. About 37 percent of the population living below US\$3.2/day receives social assistance. More than 17 percent of the bottom quintile of households receive remittances from abroad, accounting for 60 percent of their income. Income growth and rising remittance inflows will remain the primary drivers of poverty reduction over the medium-term.

3. **The outbreak of COVID-19 caused by the 2019 novel coronavirus (SARS-CoV-2) poses a significant threat to the ambitious economic and social transition that is under way.** Mobility limits have negatively affected industrial output and commerce while jeopardizing the survival of the tourist sector. In addition, demand for Uzbek foreign exchange earners, such as metals, light manufacturing, chemicals, and fertilizers, has been subdued due to trading partners' weaker economies. Even though, based on survey results released in July 2020, the country's agriculture sector has been resilient

¹ WBG projections as of June 2021.

² A collaborative effort led by the WB in cooperation with the authorities, non-governmental organizations, United Nations International Children's Emergency Fund, the European Union (EU), and US Agency for International Development (USAID).

³ WBG. 2019. *Uzbekistan Country Economic Update Summer 2019*.



in the face of the pandemic,⁴ the longer the outbreak persists, the more (and more severely) it is likely to negatively affect overall employment and remittances. Uzbek migrants living in Russia are responsible for more than 70 percent of Uzbekistan's remittance income with the recipients being among the poorest households in the country. Remittances are expected to decline, and together with the feared rise in domestic unemployment due to the curtailment of business in Uzbekistan and globally, overall poverty levels and livelihoods are expected to be impacted.⁵ Data from L2CU Surveys indicated the share of households receiving remittances in 2020 remained well below 2019 levels and self-employment fell sharply – remittances declining by 67 percent in April 2020 and were remaining 26 percent below June 2019 levels in June 2020.

4. Uzbekistan is vulnerable to the impacts of climate change, particularly in the sectors of agriculture, energy, and water resource management. There are three Agro-Ecological Zones (AEZs): (i) Steppe zone; (ii) Piedmont zone; and (iii) Highland zone. These AEZs differ in terms of terrain, climate, soil type, and water availability – as a result, baseline agricultural conditions, climate change impacts, and adaptive options are different in each AEZ. Anticipated climate impacts include increases in monthly maximum temperatures across Uzbekistan, high variability of rainfall across different agroecological zones, and increased glacier melting with implications for water availability and river flow. For agriculture, an increase in extreme temperatures and rainfall events due to climate change increases risks of water availability and incidence of pests, insects, and diseases. Droughts may become more frequent due to decreases in runoffs of Amu and Syr Darya Rivers. Climate change is also expected to adversely affect soil fertility and productivity, as a consequence of droughts and exacerbated soil salinity due to water scarcity and other factors. Most of the rural population depends on agriculture for their livelihood and is set to be disproportionately affected by climate change risks given their dependence on agriculture, relatively lower ability to adapt, and high share of income spent on food (on average 50 percent of their income). Climate impacts could reverse progress made in poverty reduction, and negatively affect food security and economic growth in vulnerable rural areas, as changes in the seasonal distribution of temperature and precipitation undermine predictable agriculture production.⁶

5. Uzbekistan's working-age population has been increasing over time, but formal job creation has been slow resulting in high informality and inactivity rates. The working-age population has increased by more than 50 percent since 2000, from 14 million to 22 million today, but job creation has not kept up. Unemployment⁷ and inactivity rates are high, especially for youth, women, and people in the two poorest quintiles.⁸ Job quality and inclusiveness remain a concern, as average wages are low (US\$218 average monthly nominal wage in 2018)⁹ and almost half of Uzbek workers are in the informal sector.¹⁰ L2CU data (2018) indicate that the lack of jobs and low salaries are important concerns, especially among the poorest people and the beneficiaries of social assistance.¹¹

⁴ Center for Economic Research and Reform (CERR), with the support of the United Nations Development Program in Uzbekistan (UNDP). http://www.una-oic.org/page/public/news_details.aspx?id=307218&NL=True

⁵ World Bank Project Appraisal Document for Uzbekistan Emergency COVID-19 Response Project (P173827).

⁶ WBG. 2019. *Uzbekistan Country Economic Update Summer 2019*.

⁷ Official unemployment rates averaged about 5.3 percent between 2014 and 2017. A change in methodology in October 2018 led to a large increase to 9.3 percent in 2018.

⁸ "Uzbekistan Risk and Vulnerability Assessment 2019," World Bank, forthcoming. "The Skills Road: Skills for Employability in Uzbekistan." 2014, World Bank.

⁹ State Statistical Committee.

¹⁰ World Bank. 2014. "The Skills Road: Skills for Employability in Uzbekistan." Washington, DC: World Bank.

¹¹ World Bank Project Appraisal Document for Uzbekistan Emergency COVID-19 Response Project (P173827).



B. Sectoral and Institutional Context

6. **International experience has shown micro, small and medium enterprises (MSMEs) can be engines for growth in developing economies.** Evidence globally shows that SMEs generate more jobs than large-scale enterprises in developing economies. The Government's economic agenda has recognized the need to find new drivers of economic growth and has placed significant emphasis on accelerating private sector growth and modernization of the economy to ensure income growth and job creation. Within the Uzbek economy, MSMEs account for a significant share of economic activity. In 2019, around 76 percent of all employed individuals in Uzbekistan worked in small businesses or individual private enterprises – an estimated 10.3 million individuals. Small businesses and individual private enterprises also contributed 22 percent of exports – US\$4.7 billion equivalent – and generated an estimated 56.5 percent of GDP.

7. **Uzbekistan's rural economy shows strong potential in agriculture and food processing, textiles, tourism, and small-scale manufacturing.** The 2018 Country Private Sector Diagnostic and the recently published Agri-Food Job Diagnostic in Uzbekistan have identified sectors with strong potential for growth and showed that food production, horticulture and agri-processing all have the potential to help propel the Uzbek economy toward much higher economic growth rates and generate more employment. The Agri-Food Job Diagnostic specifically lays out a roadmap for operationalization of the implicit job agenda of the Strategy for Agricultural Development 2020-2030 (hereafter Agricultural Strategy for Uzbekistan). The illustrative scenarios presented in the report show that public policies and investments can help the agri-food sector increase employment between 19 and 32 percentage points in 2030 compared to 2019, allowing annual creation of 0.7 to 1.3 million jobs. Particularly the horticulture sub-sector with strong comparative advantages and market opportunities has a potential for more productive and sustainable jobs. Those jobs will be inclusive, available to women and youth not only in Tashkent and other large cities, but also in rural areas and secondary towns. The Government's reforms agenda has also prioritized transformation of the cotton sector and promotion of domestic textile production with the aim of reducing raw cotton exports and developing a more vibrant domestic industry. As part of these efforts, the Government has provided land to the cotton and horticulture clusters under long-term leases to further facilitate the supply chain integration and develop new export markets.

8. **Access to finance constraints for MSMEs has persistently hampered enterprise growth, even before the COVID-19 pandemic.** While credit growth has increased in recent years as a result of several government programs, MSMEs continue to highlight access to finance as an obstacle. According to recent 2019 Enterprise Survey, access to finance was the fourth biggest obstacle for firms, after taxes, informality, and electricity. According to the survey, only 22 percent of firms surveyed had an active bank loan/credit compared with Europe and Central Asia (ECA) regional average of 37 percent. This represents a decline from the 2013 survey – which found 24 percent of surveyed firms had active bank loans. Uzbek firms also ranked lower than ECA regional averages on purchase of fixed assets in the 2019 survey, which may be an indicator of inability to increase capital in line with business needs and potentially slower future growth. Access to finance, especially for MSMEs, will likely become even more difficult due to the COVID-19 crisis. Liquidity in the banking sector has been depleted over recent years due to rapid credit growth rates and funding for long-term MSME lending is limited. Overall, funding sources are usually tied to specific program features and available funds from deposits, which are still underdeveloped, are short-term and do not allow lending beyond 18 months.

9. **Uzbekistan ranks high at global gender-focused indices, but there are still gender inequalities, and the crisis could widen pre-existing gender gaps in economic participation.** In 2017, Uzbekistan ranked 105th out of 185 countries



in the Human Development Index and was categorized as a high human development country.¹² The country was ranked 57th out of 188 countries in the 2017 Gender Inequality Index, primarily due to women's high levels of education and labor market participation. Both the Global Gender Gap Index and the Gender Equity Index show that Uzbekistan is close to attaining gender equality in education (enrollment, educational attainment, and literacy) and health (sex ratio at birth and healthy life expectancy). According to the 2019 L2CU data, 95 percent of citizens believed that women have equal access to education, employment, and healthcare. Nevertheless, gender disparities persist with one manifestation being that women tend to be employed in the social sector or in part-time, seasonal, low-paying, or unskilled jobs in the formal and informal sectors.¹³ Around 26 percent of firms surveyed in the 2019 Enterprise Survey had some level of female ownership but only 12 percent had majority female ownership.

10. **The President has signed a US\$1 billion economic relief plan to aid the economy and vulnerable population groups as a response to COVID-19.**¹⁴ The plan establishes the Anti-crisis Fund and National Anti-Crisis Commission to oversee and coordinate preparedness and response measures. The Anti-crisis Fund will finance COVID-19 prevention and control activities, social support to low-income families, and support to strategic economic areas and small businesses. The plan also introduces time-limited tax rate reductions to support individuals and enterprises.¹⁵

11. **A resilient recovery will require a suite of instruments that strengthen the existing ecosystem for MSME development.** Experience from the Ferghana Valley Rural Enterprise Development Project (FVREDP, P166305) has shown the potential to develop a micro-enterprise support ecosystem that includes non-financial services such as advisory services, business development and incubation together with financial services. Approved in March 2019, the FVREDP finances entrepreneurship support through business advisory services and start-up incubators that offer a structured model to facilitate enterprise establishment and new entrepreneurship. The project has established nine business incubator hubs in three regions through the Chamber of Commerce and Industry (CCI) network and will soon launch innovation start-up competitions through regional innovation centers. The incubation process provides a platform for start-ups to acquire business, financial and management skills from experienced professionals, coaching and mentoring from entrepreneurs and financiers, peer learning from fellow start-ups and a platform for connecting with services, finances, and markets. To date nearly 450 SMEs have benefited from the FVREDP credit line and around 7,850 jobs have been created.

C. Relevance to Higher Level Objectives

12. **The proposed project is aligned with the World Bank Group's "Saving Lives, Scaling-up Impact and Getting Back on Track" approach paper of June 2020 in response to the COVID-19 crisis.** Specifically, the project will support two out of four focal areas of the WBG crisis response support: (a) economic response for saving livelihoods, preserving jobs, and ensuring more sustainable business growth and job creation by helping firms and financial institutions survive the initial crisis shock, restructure and recapitalize to build resilience in recovery; and (b) focused support for strengthening policies, institutions and investments for resilient and sustainable recovery. In particular, the project will support the rural

¹² WB background paper. 2019. *Enhancing the Livelihoods of Rural Women in Uzbekistan*.

¹³ Asian Development Bank. 2018. *Uzbekistan Country Gender Assessment Update*.

¹⁴ Presidential Decree#5969 (YF-5969), March 19, 2020.

¹⁵ World Bank Project Appraisal Document for Uzbekistan Emergency COVID-19 Response Project (P173827).

enterprises and financial institutions to survive the initial crisis shock, restructure and recapitalize to build resilience in recovery.

13. The proposed project is consistent with the Country Partnership Framework (CPF) for FY16-20 adjusted through Performance and Learning Review for Uzbekistan and falls under the Focus Area 1: Sustainable transformation towards market economy, supporting a more strategic engagement in agriculture; and Focus Area 3: Investments in human capital and will support the CPF's higher level goals to support the growth of the private sector and citizen engagement. The project will also support the CPF's objective of gender inclusion to achieve Uzbekistan's development objectives and focus on rural women, recognized as highly vulnerable by the CPF.

14. The Second Rural Enterprise Development Project (REDP) will support the Government of Uzbekistan's Development Strategy for 2017-2021 and Strategy for Agricultural Development 2020-2030, which both share the goal to unlock economic growth, job creation and poverty alleviation through development of strategic sectors and growth in the private sector. The recent reform program includes a number of structural reforms and measures to improve the competitiveness of the economy including limiting the size and reach of state-owned enterprises, improving the protection of private property rights, encouraging growth of small business and private enterprises, strengthening and modernizing the financial sector, and modernization and diversification of its leading industries.

15. In 2017 Uzbekistan submitted its Intended Nationally Determined Contribution (INDC) to the UN Framework Convention on Climate Change¹⁶, where the country emphasized the existing and future climate vulnerabilities for agriculture, in addition to explicitly including agriculture in its proposed adaptation as well as mitigation strategies, policies, programs, and measures. Nationally proposed measures and actions for adaptation to climate change in agriculture are closely related to mitigation measures, and they include: improvement of the climate resilience of agriculture through diversification of food crops production pattern; conservation of germplasm and indigenous plant species and agricultural crops resistant to droughts, pests and diseases; and development of biotechnologies and breeding new crop varieties adopted to conditions of changing climate.

II. PROJECT DESCRIPTION

A. Project Development Objective

16. The project development objective is to support the expansion of rural enterprise activity, investments and job creation in regions supported by the project. The project will be implemented in 10 regions (Tashkent, Syrdarya, Jizzak, Samarkand, Kashkadarya, Surkhandarya, Navoiy, Bukhara, Khorezm and Karakalpakistan) representing the remaining regions not covered in FVREDP. The choice of nation-wide coverage was based on Government's strong interest in maximizing the coverage of the project's investment across the country and building a base for expanding access to entrepreneurship support.

¹⁶ https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Uzbekistan%20First/INDC%20Uzbekistan%2018-04-2017_Eng.pdf



17. The project's results will be measured by the following PDO indicators:

- Enterprises supported under the project (Number)
- Increase in revenues of enterprises supported under the project (Amount (US\$))
- Beneficiaries of job-focused interventions (CRI, Number)
- Additional jobs generated by enterprises supported by the project (Number)
- Amount of water, gas and electricity saved due to introduction of smart technologies by enterprises supported by the project (Percentage)

B. Project Components

18. **Component 1: Enterprise Development (IDA US\$20.0 million).** The first component will facilitate the establishment and growth of farms, agribusinesses, and rural enterprises in the targeted rural areas through the provision of technical support and business facilitation activities. As part of this, the component will disseminate the information on the climate change adaptation and mitigation measures, organize awareness raising workshops, strengthen the project beneficiaries' knowledge on climate-smart agricultural practices, promote the partnerships to address climate change consequences, and demonstrate climate smart technologies for small- and medium-sized agribusinesses and for farm enterprises in the project regions.

19. **Sub-Component 1.1: Business Incubation and Mentorship (US\$5.1 million).** Financing will be provided for business advisory and business development support services designed to incubate and mentor various classes of micro and small entrepreneurs. REDP will continue to establish business incubator hubs as an anchor for entrepreneurship and business development service delivery based on a similar methodology as utilized under FVREDP. A competitive process will be used to contract service providers to establish business incubator hubs. Financing will also be provided to innovation startup competitions targeting youth with the aim of promoting innovation and providing more in-depth mentorship and support to incubate new businesses. These competitions will be implemented within business incubator hubs using the same service provider. Technical Assistance (TA) and training activities will be modular and include modules targeting climate resilience and adaptation strategies. Dedicated training sessions targeting youth and women will be supported to ensure outreach to these groups.

20. **Sub-Component 1.2: Partnership and Value Chain Development (US\$0.7 million).** The project will promote building of value chains and productive partnerships between producers and processors, and producers and traders, through financing for market/demand research for the specific type of product to be sold, training of value chain participants, and provision of technical advice on inputs and technologies, sales and marketing advice. This will also include technical advice to strengthen value chains to better incorporate climate risk reduction. The project will support producer participation in national and international trade shows to promote investments and exports, and to improve quality of production, marketing and investment decisions. The project will include organizing visits of large buyers from key countries to Uzbekistan (e.g. a group of supermarket procurement managers and buyers from leading import companies). The investments under the project will be driven by a value chain assessment undertaken in the first year to determine priorities. This initial value chain assessment would incorporate criteria around economic potential as well as the potential to strengthen inclusion of vulnerable groups into value chains and SMEs.



21. **Sub-Component 1.3: Climate Smart and Green Technology Demonstration (US\$5.5 million).** This sub-component will aim to demonstrate climate smart technologies in small- and medium-sized agribusinesses and farm enterprises in the project regions. The project will support the introduction of innovative technologies that will have a significant impact in the long run on reducing GHG emissions, building resilience, and developing capacity for adaptation to climate change. This could also include renewable energy technologies that have been shown to be impactful and cost-efficient but have not been widely demonstrated and adopted in Uzbekistan, such as bio-gas digesters, solar water heaters, solar photovoltaics, biomass, wind and micro-hydroelectric installations. Further preparation and dissemination of information on the demonstrated technologies will be supported through workshops, hands-on demonstrations, peer-to-peer learning, and materials supported under this sub-component. Technology demonstrations will be selected based on the prioritization process initiated under sub-component 1.2, which would identify value chain and SME priorities. Contracted service providers and international partners will implement demonstration activities. Contracts with international scientific institutions such as those under the Consultative Group for International Agricultural Research (CGIAR) institutions such as the International Water Resources Management Institute (IWMI) will also be explored.

22. **Sub-Component 1.4: Women's Entrepreneurship Development (US\$8.7 million).** This sub-component will enable the project to develop more specific entrepreneurship support interventions that can better address women's particular needs, including low-income women who face greater constraints in starting new business activities. The sub-component will scale up a pilot project financed through the World Bank Japan Social Development Fund (JSDF), Enhancing Economic Opportunities for Rural Women Project (EEORW, P171760), that launched in mid-2021. This pilot project utilizes a group-based approach to provide a package of services tailored to the needs of women in low-income households in rural areas around financial literacy, groups savings and development of business plans. The pilot currently covers 112 mahallas in 8 districts in Ferghana and Jizzakh with implementation led by the Ministry of Mahalla and Family Affairs (MMFA). The methodology used in the pilot project is centered on mobilizing groups of women and using groups as an entry point for providing the information, skills, assets, experience, and networking and includes a small micro-grants program to launch business activities for those successfully completing a viable business plan and mobilizing co-financing. REDP will apply the same model in additional districts in the REDP project area. REDP financing will target support for women's livelihood groups in approximately 20 districts, using the same targeting methodology as EEORW – which is based on analysis of demographic and vulnerability data for rural villages, including the population size, number of female-headed households, number of unemployed women and their education levels, number of low-income households, and number of persons with disabilities. A Matching Grants Guidelines will be a condition of disbursement and will be modeled on the current grant manual in use under EEORW. Matching Grants will also support adoption of climate adaptation technologies¹⁷; criteria for classification of climate adaptation technologies will be defined in the Matching Grant Guidelines.

23. **Component 2: Access to Finance (IBRD US\$175.8 million).** The second component will address key constraints to accessing finance faced by farmers, agribusinesses, and other beneficiaries engaged in agriculture and rural economic activities. The component will support the expansion of two financing instruments: a credit line and a partial credit guarantee mechanism. The micro- and small farmers and agribusinesses operating in Uzbekistan's agriculture and small-scale rural enterprise sector lack access to longer-term financing and suitable products and services due to the funding structure of financial institutions, limited use of appropriate lending methodologies and higher risks associated with the

¹⁷ Such as equipment that utilizes renewable energy or is energy efficiency or water saving; or agronomic or production practices that promote improved input efficiency, and adaption to heat and drought conditions.



sector. The provision of long-term funding for the sector and suitable credit enhancement mechanisms can help alleviate these structural constraints. Moreover, financial products that are tailored to the agriculture production cycles and to the needs of the smaller enterprises, in particular start-ups, are in short supply, highlighting the need to further support financial institutions in developing specific products/services for this segment and in building capacity in new lending methodologies.

24. Sub-component 2.1: Credit line for Farmers, agribusinesses, and rural enterprises for climate-resilient investments (US\$ 146 million). The objective of the credit line will be to support lending to farmers, agribusinesses, and rural enterprises in project areas. The credit line will support climate-resilient investments in the agricultural and rural sectors, targeting at least 50 percent of the sub-loan portfolio as “climate smart”.¹⁸ The credit line will be compliant with World Bank Guidance for Financial Intermediary Financing and will provide financing through one General Window and one limited-scale Special Window. The General Window would finance individual loans in the amount up to US\$500,000 to meet the needs of small and medium agribusinesses for climate-resilient investments who are generally operating at this scale. The Special Window, using more streamlined procedures, will provide loans up to US\$50,000 targeting micro and small beneficiaries. This Special Window is deemed necessary to fill the credit gap of micro- and small enterprises who have not been able to access previous credit lines. The micro and small farming and agribusiness enterprises play a particularly important role in rural economic diversification, poverty reduction and income generation. The Special Window would also cater for the financing needs of the startups and women entrepreneurs supported under component 1. The allocation is proposed as follows: 75 percent of the credit line allocated to the General Window, and the Special Window utilizing the remaining Credit Line allocation. The Participating Financial Institutions will be required to draw on both, the General Window and the Special Window, catering to the needs of micro-entrepreneurs, to ensure a well-diversified sub-loan portfolio. Credit Line Investment Guidelines (CLIG) will provide the detailed eligibility criteria, and terms and conditions of the financing under the various windows, as well as responsibilities of the implementing parties (PFIs, sub-borrowers, and the PIU under the MEDPR).

25. The following simplified procedures for sub-loan applications are proposed to support smaller farmers and agribusinesses: (i) streamlining documentary requirements, especially for loans below US\$50,000; (ii) strictly enforcing application of the agreed prior and post-review formats; (iii) submitting the Statements of Expenditure for the sub-loans up to US\$50,000 in a table format, indicating some key parameters; (iv) digitizing the sub-loan application process including environmental and social safeguards; and (v) encouraging the use of the refinancing facilities for small loans. The project would encourage the accreditation of Banks – public and private - with a clear strategic orientation and proven capacity to reach out to micro- and small enterprises in rural areas. This may include the accreditation of Micro Credit Organizations on a pilot basis, either directly or indirectly through participating financial institutions.

26. Sub-component 2.2: Partial Credit Guarantees under the State Fund for Support of Entrepreneurship (US\$29.3 million). The project will expand the partial credit guarantee (PCG) mechanism of the State Fund for Support of Entrepreneurship supported under FVREDP given that collateral requirements for rural and agricultural lending remain

¹⁸ In order for credit line investments to be classified as climate smart they will be screened and classified as utilizing approaches that reflect use of climate adaptation technologies and/or management methods (climate adaptive agricultural practices) or climate mitigation (use of low emission agricultural practices) as described resource documents such as the FAO Climate Smart Agriculture Sourcebook <https://www.fao.org/climate-smart-agriculture-sourcebook/en/>; and Reducing the Vulnerability of Uzbekistan's Agricultural Systems to Climate Change: Impact Assessment and Adaptation Options. <http://documents.worldbank.org/curated/en/485571468318338846/>.



high in Uzbekistan, revealing a persistent risk aversion of Participating Financial Institutions (PFIs) towards this segment.¹⁹ Well-designed PCGs can be an effective tool to address financial institutions' risk aversion towards underserved sectors, especially if the mechanism is accompanied by other efforts to increase access to finance. Many countries have expanded their credit enhancement mechanisms to address the impacts of the COVID-19 pandemic, which have exacerbated pre-existing challenges.

27. The REDP will allocate funds to expand the current PCG mechanism under FVREDP and support the concurrent implementation of an institutional strengthening agenda, identified in the technical assistance undertaken under FVREDP. Institutional and regulatory reform measures to be adopted by the State Fund for Support of Entrepreneurship will align the PCG scheme with best practices, optimize the use of the scheme, and promote its long-term sustainability. These reform measures also respond to feedback from current PFIs, engaged in the FVREDP, especially with regards to the design and operational features of the existing scheme. Based on ongoing TA under FVREDP and initial conversation with PFIs, some challenges and areas of further improvements will include:

- a. *Low levels of awareness:* The level of awareness about the benefits of the PCG scheme appear to be low and overshadowed by the State Fund's interest rate compensation scheme. Additional efforts to raise awareness about the PCG scheme among PFIs (from senior management to line loan officers) and MSMEs might be needed.
- b. *Incentives for PFIs to utilize guarantees:* While guarantee applications have increased consistently since the inception of the scheme, especially during the COVID-19 crisis, the additionality and benefits of the scheme for PFIs are perceived to be low given the design of the existing guarantee. Additionality, in this context it is defined as the need to expand lending to borrowers who would not otherwise have access to credit without the guarantee. The current level and type of coverage does not seem to provide sufficient incentives for PFIs to reach underserved segments. The ultimate coverage provided by the State Fund is low: the guarantee is up to 50 percent of the loan amount and the coverage is not on *pari passu* basis, as it decreases along with loan repayments. In addition, PFIs can only make a claim after initiating legal proceedings to execute the collateral. With a decreasing coverage, historically low non-performing loans ratios (pre-pandemic), relatively efficient court procedures, PFIs de facto do not make claims. These factors combined limit PFIs' ability to effectively use the PCG scheme for its intended use, which is to address risk aversion and alleviate collateral constraints.
- c. *Improving risk management and governance:* Currently risk management is done on a limited basis, with the State Fund relying on PFIs' systems and policies. However, the State Fund is currently upgrading its IT systems and capacity to collect information from PFIs, including repayment and non-performing loans, which would provide an important foundation for improvements in risk management. Sound risk management policies and systems, combined with adequate governance structures, are critical for the sustainable development of the scheme.

¹⁹ According to the 2019 Enterprise Survey, 96.4 of loans (96.9 percent in 2013) required collateral. While consistent with averages observed in the ECA region, collateral requirements have worsened over the last decade, with the value of collateral needed increasing from 129.7 percent of loan amount in 2008 to 166.1 percent in 2019. In addition, collateral requirements remain high in particularly for some segments of small businesses.



28. Financing under this sub-component will be used to capitalize the partial credit guarantee scheme within the State Fund for Entrepreneurship Support. As under the FVREDP, financing will be provided in two tranches, with the second tranche released once the volume of guarantees issued is at least two times of the value of the first tranche, to ensure the scheme is leveraging funds before receiving new resources. REDP will support TA to facilitate institutional reforms in the State Fund under sub-component 2.3. This TA could include activities focusing on institutionalizing risk management systems and policies, reviewing design of guarantee features and implementation aspects, strengthening M&E framework, and supporting continued dialogue on long-term structural reforms related to the scheme's operational and financial autonomy, stronger governance arrangements, and independent supervision, which will be important building blocks for promoting the sustainable expansion of the scheme, including beyond the project cycle. These reforms, which could be sequenced during the REDP project implementation, could require changes in relevant resolutions and decrees.²⁰ The Partial Credit Guarantee Guidelines will provide the detailed eligibility criteria, and terms and conditions of the financing under the PCG scheme, as well as responsibilities of the implementing parties (PFIs, sub-borrowers and the State Fund for Entrepreneurship).

29. **Sub-component 2.3: Technical Assistance to PFIs and the State Fund for Entrepreneurship Support (US\$ 0.5 million).** This sub-component will support technical assistance and training for financial institutions and targeted training and technical assistance to the State Fund for Entrepreneurship. Training will be provided to the commercial banks to introduce innovative financing instruments such as digital financial services and value chain finance modalities for agricultural and rural enterprises, accreditation and management of environmental and social management systems. The training program would focus on the use of new financial products to target clients engaged in horticulture, livestock, silk production and other rural entrepreneur's production activities, evaluating the suitability and effectiveness of these new financial products and mitigating the possible risks associated with lending to these sub-sectors. This training will be complementary to, and built into, the upcoming training program financed by the Horticulture Development Project (P133703) to the PFI lending staff in a number of areas, including fundamentals of lending to the agricultural sector; credit analysis and forecasting of capital flows; risks related to the financing of collection of raw materials and processing system; lending to the horticulture and silk producers, and others. Separate trainings will be conducted for Environmental and Social Specialist of PFIs by the PIU. As noted above, TA to the State Fund for Support to Entrepreneurship will cover a range of topics focusing on institutional reform and strengthening and include upgrading staff capacity through short- and long-term training.

30. **Component 3: Project Management (US\$3.75 million).** This component would support the implementation, management, monitoring and evaluation of the project. A PIU will be established under the Agency for the Work of Mahallabay and Entrepreneurship Development and will provide overall project coordination and implementation support, including implementation planning, technical supervision, fiduciary management (financial management, procurement), environmental and social safeguards implementation and monitoring and evaluation. The project will finance the goods, technical assistance, consulting services, training, and incremental operational costs for the PIU under MEDPR and other relevant agencies as appropriate to facilitate implementation of the project (including the areas of financial management, procurement, disbursement, and monitoring and evaluation).

²⁰The State Fund for Support of Entrepreneurship was established by specific legislation - the Presidential Resolution No. 3225 under the Cabinet of Ministers. In August 2019, the State Fund was transferred to the SME Agency under the MEDPR by decree No. UP-5780. The State Fund is governed by Resolution of the Cabinet of Ministers No. 28 (January 2020). In February 2021, the resolution governing the SME agency was amended also introducing changes to the State Fund.

31. **Collaboration with IFC.** The project is expected to closely collaborate with IFC, in particular in the areas of (i) agricultural value chain development and financing, including drawing on the benefits of the movable asset-based lending approach for value chain finance, which IFC is aiming to encourage through supporting legislative and regulatory work; (ii) introduction of a microfinance product for the financial sector, which will be aimed at commercial banks and, possibly, microfinance sector; (iii) technical assistance to the Participating Financial Institutions, including the project's PFIs would also draw from the credit scoring tool that IFC has developed, and which has been used under the previous credit lines by selected PFIs; and (iv) co-financing of joint investment projects when the project beneficiaries submit a sub-loan application requesting for IBRD and IFC financing. Further co-financing and collaboration opportunities would be identified, for instance, also on supporting agro-industrial clusters, in particular given IFC's interest to support textile sector.

32. **Maximizing Finance for Development (MFD).** The project will initiate the MFD engagement by: (i) enhancing the expansion of rural enterprise activity, investments and job creation in regions; (ii) facilitating the establishment and growth of farms, agribusinesses, and rural enterprises in the targeted rural areas through the provision of technical support and business facilitation activities; (iii) disseminate the information on the climate change adaptation and mitigation measures, strengthen the project beneficiaries' knowledge on climate-smart agricultural practices & promote the partnerships to address the climate change consequences; (iv) addressing key constraints to accessing finance faced by farmers, agribusinesses and other beneficiaries engaged in agriculture and rural economic activities; (v) Providing technical assistance for financial institutions and Fund for Entrepreneurship to introduce innovative financing instruments; (vi) working with the International Finance Corporation (IFC) on agri-finance and good agricultural practices; and (vii) proactively collaborating with other donors in supporting agriculture .

C. Project Beneficiaries

33. **Primary beneficiaries.** The project's primary target beneficiaries are current or potential entrepreneurs operating individual, micro, or small enterprises in the project regions. These enterprises will benefit from the provision of training, technical assistance, services, facilitation, and access to SME financing. Training, TA, and maximum loan sizes will be tailored to reach this segment of the SMEs. A typology of beneficiaries is contained in Table 2 below:

Table 2: Typology of beneficiaries

Target Beneficiary Groups	Constraints/bottlenecks	Existing interventions or programs	Project interventions
Micro-entrepreneurs and new home-based businesses	<ul style="list-style-type: none"> Knowledge of business opportunities and markets Limited financial literacy Access to appropriate technology Access to credit with no collateral 	<ul style="list-style-type: none"> Every family an Entrepreneur Program (no collateral loans, limited technology promotion activities) 	<i>Soft investments:</i> <ul style="list-style-type: none"> Business advisory/incubation Technology promotion <i>Hard investments:</i> <ul style="list-style-type: none"> Micro-credit pilots
Small to medium size entrepreneurs	<ul style="list-style-type: none"> Knowledge of regional or export business opportunities and markets Appropriate technology 	<ul style="list-style-type: none"> State Fund for Entrepreneurship Existing credit lines under State budget, World Bank, 	<i>Soft:</i> <ul style="list-style-type: none"> Business advisory/incubation Technology and market promotion



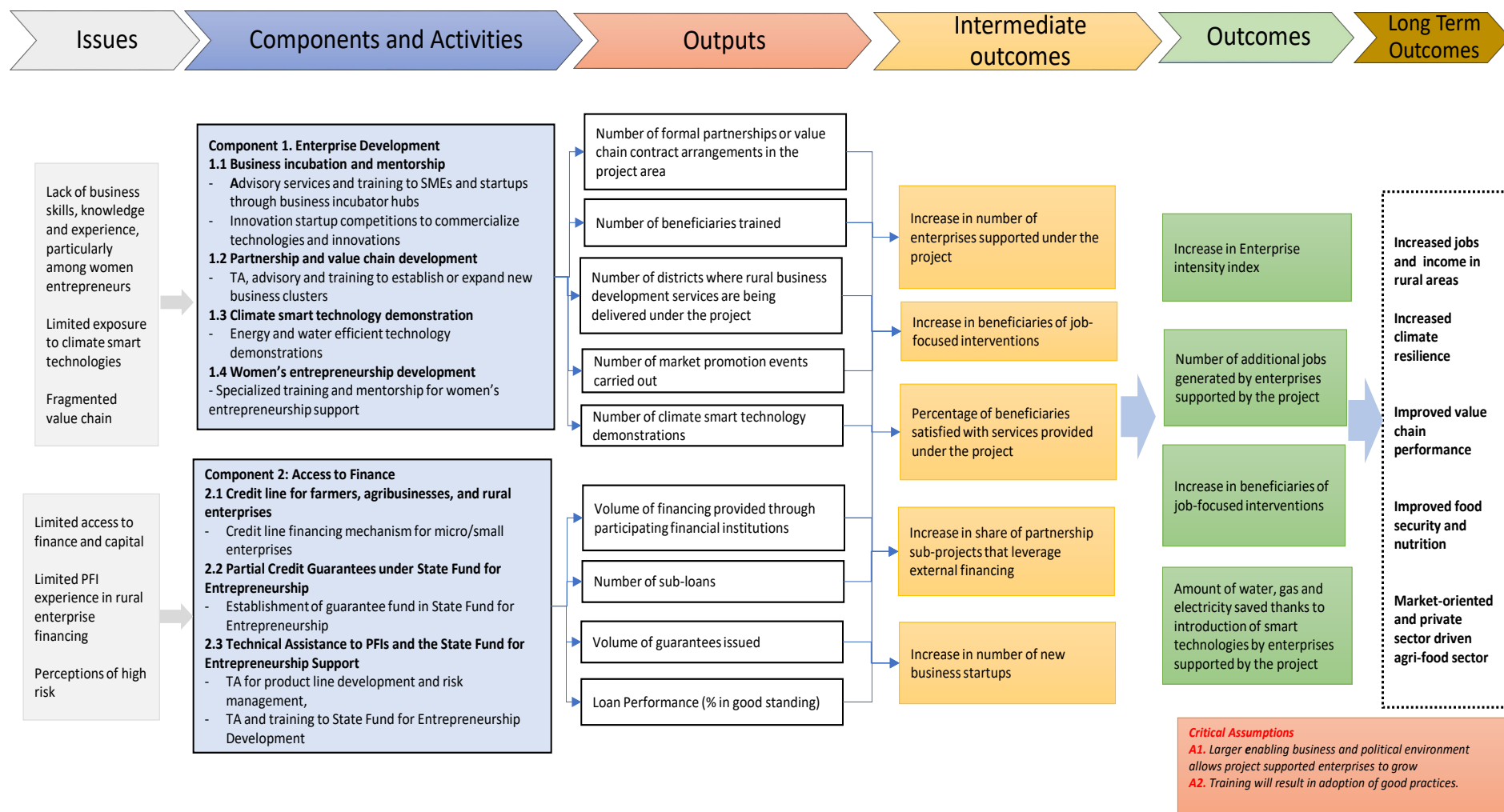
Target Beneficiary Groups	Constraints/bottlenecks	Existing interventions or programs	Project interventions
	<ul style="list-style-type: none"> Access to credit with limited collateral 	Asian Development Bank (ADB) projects (but very limited access to small enterprises)	Hard: <ul style="list-style-type: none"> Credit line for small enterprises Guarantee fund for small to medium enterprises Financial innovations pilot
Groups of producers with potential to form new clusters	<ul style="list-style-type: none"> High transaction costs to organize producers within value chain Limited knowledge of producer organizational models High demand for credit to expand business activities Productive infrastructure constraints 	<ul style="list-style-type: none"> Existing credit lines under State budget, World Bank, ADB projects (but limited access) Farmers Council Fund 	Soft: <ul style="list-style-type: none"> TA for producer organization, cluster development (cluster dev. sub-projects) Technology and market promotion Hard: <ul style="list-style-type: none"> Credit line for small enterprises Guarantee fund for small to medium enterprises
New entrepreneurs	<ul style="list-style-type: none"> Translating innovative ideas into viable business plans Limited business skills Access to finance with no business track record and limited collateral 	<ul style="list-style-type: none"> Youth Union Fund Every Family an Entrepreneur Program Innovation centers (Min. of Innovation) Co-working spaces (Ministry of Justice) 	Soft: <ul style="list-style-type: none"> Business advisory/incubation Innovation start-up support/innovation centers Technology promotion Hard: <ul style="list-style-type: none"> Micro-credit/micro-finance pilot
Rural jobseekers	<ul style="list-style-type: none"> Lack of skills for growing industries/agri-businesses Cost of on-site job training 	<ul style="list-style-type: none"> Current Government employment programs 	Soft: <ul style="list-style-type: none"> TA to develop rural apprenticeship models

D. Results Chain

34. Project results will focus on increasing enterprise intensity; increasing employment (particularly among youth and women) as a result of new business start-ups or expansions of existing enterprises; increasing access to financial and non-financial services by micro, small and medium businesses; and increasing market linkages within value chains in targeted areas.



Theory of Change





E. Rationale for Bank Involvement and Role of Partners

35. The Bank financing under the project will be focused on measures to stimulate rural sector growth and address gaps in service delivery and access to technology for rural entrepreneurs. Project investments are focused on addressing the lack of information and coordination among market actors (to be addressed by project investments value chain development and technology promotion in component 1) and the limited amount of long-term financing and risk sharing mechanisms for farmers and agribusinesses (to be addressed by project investments in a dedicated long-term credit line, and PCG in component 2). Project investments in public service delivery and capacity development for small entrepreneurs (to be addressed by project investments in business development services (BDS) and business incubation) are needed to address a gap in service provision that often leave out smaller entrepreneurs. The Bank has also become a trusted partner in the Government's reform agenda and brings a wide range of global experience both in local community development methodologies and small-scale enterprise development models.

36. The Bank's engagement in the financial sector under the project is expected to provide a catalyst for further growth to strengthen the delivery of needed financial and non-financial services from the commercial banking sector. The Bank is currently engaged in a larger financial sector strengthening and plans on providing capacity building support to financial institutions on micro-finance products and SME financing through the IFC.

37. Discussions with other donor partners are on-going - while no co-financing is currently planned, complementary activities have been developed within the project. The Bank has developed partnerships with most of the development partners active in Uzbekistan through joint or parallel financing of investment operations as well as TA to the Government. Currently, the International Fund for Agricultural Development (IFAD), ADB, EU, and Agence Française de Développement (AFD) are active or programming new support for SME development in the sectors targeted by the project. Both IFAD and AFD have plans to channel resources through the State Fund for Entrepreneurship and preliminary discussions have been held on harmonizing approaches. United Nations Development Programme is also supporting innovation and SME start-up activities. The Bank will pursue TA partnerships with other development partners where possible.

F. Lessons Learned and Reflected in the Project Design

38. **Lessons learned from FVREDP.** Implementation of Component 1 activities around innovation and innovation start-up competitions drew on lessons learned including implementation arrangements and the need for simplified central procurement by the PIU instead of implementing partners to reduce the time required to formalize relationships between various implementing partners.

39. **Support to women's entrepreneurship requires dedicated instruments.** Lessons learned from similar operations have shown that women sometimes face unique constraints in entrepreneurship due to access to training opportunities, limited past experience in running a business, and time constraints due to gender roles



among others. Global experience has shown specific interventions tailored to the requirements of women has been shown to be successful in supporting women to start their own businesses. Grants rather than loans, have also been shown to be more catalytic in generating economic activity and income for lower income beneficiaries. The project's inclusion of a dedicated sub-component will build a more tailored approach to women's entrepreneurship based on the Uzbek context.

40. Access to finance and use of credit lines in the project design. The project's proposed use of credit lines is based on the recognition that while financial sector reform is underway, agriculture sector credit remains very limited, and the banking sector continues to have limited access to the long-term deposits or capital needed to scale up agricultural lending. Privatization targets for state-owned banks have been established as part of the Government's reform program but are expected to take time to complete. The six commercial banks are targeted for privatization by 2025. Mobilizing foreign investment or external capital to reach the level where SMEs and agri-business have wide access to credit may be several years in the future. By providing credit line resources the project would support Government's job creation and rural development objectives while longer term reform of the sector can be completed.

41. Global experience has shown the importance of banking system readiness and availability of appropriate instruments to scale up agriculture lending. Global experience has shown that the banking sector has gradually scaled up lending to agriculture based on banking sector readiness and availability of necessary instruments. In Moldova and Romania, privatization has led to entrance of investors in the sector that are able to provide long-term funds, in particular foreign investors. Proposed project investments in building the capacity of banks are expected to contribute to the development of banking products and experience that will enable PFIs to expand agriculture lending into the future. Global experience has also shown government priorities in the relationship with the World Bank have gradually switched from credit lines towards investment, capacity building, and other "soft" activities over time. In Kazakhstan, Government has taken on the role of supporting agriculture through the budget support and more agricultural credit options, while in India, Government has taken up the role of the supporter of the sector and uses budget funds to replace the borrowing from the Bank. World Bank investment in Uzbekistan is expected to follow a trajectory that moves away from large scale credit line investments as the banking system develops and agricultural businesses and business opportunities expand.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

42. Within MEDPR, the PIU will be located within the Agency for the Work of Mahallabay and Entrepreneurship Development (the Agency). This Agency operates as a dedicated agency of MEDPR with the mandate to implement Government programs in the area of entrepreneurship. The Agency reports to the Minister of MEDPR and will take on responsibility for providing oversight over day-to-day operation of the PIU. The project will be implemented in close coordination with the current FVREDP Project Implementing Unit to take advantage of project synergies and implementation experience. The World Bank carried out a fiduciary assessment of the Agency where the new PIU will be established. A number of measures will be put in place to



strengthen capacity to undertake fiduciary arrangements under the project and meet the minimum fiduciary requirements of the World Bank. These include additional fiduciary staff and training on World Bank procedures.

43. The project will include measures to strengthen the PIU's capacity for project management, monitoring and evaluation. The PIU will put in place a staffing mechanism for: (i) overall project management, as well as contract administration, procurement, safeguards, and financial management; and (ii) a robust performance-based Management Information System (MIS), beneficiary satisfaction survey, data collection, and reporting on key performance output and impact indicators, through baseline surveys, participatory assessments, mid-term review and final evaluation.

44. The PIU under the Agency will be ultimately and solely responsible for project fiduciary (financial management and procurement) tasks and responsibilities. The PIU will work closely with implementing partners who will be responsible for implementing specific activities within the project in the following areas:

B. Results Monitoring and Evaluation Arrangements

45. The scope and specific functions of Monitoring & Evaluation (M&E) are defined by the design elements of the project. The project's M&E system involves stakeholders at regional and national levels and multi-dimensional information including various subsectors and types of enterprises, and social impact on gender and youth. The M&E system will include routine monitoring of project implementation and results based on the data available in commercial banks, research institutions, centers and other organizations participating in the project. Evaluation of project results will be based on the baseline, mid-term and end-line surveys along with interim qualitative and quantitative assessments, which will be carried out to study changes in enterprise environment and activities as well as in perception of beneficiaries about quality of business support services and satisfaction of services.

46. M&E activities will be managed by the PIU, including aggregation of information from the field, reporting on findings, and ensuring that these results are reflected in quarterly and annual progress reports. A dedicated M&E Officer in the PIU will be responsible for this task. The M&E Reports will also propose actions to resolve any issues affecting implementation. In addition, a dedicated Environmental and Social Safeguards specialist in the PIU will monitor and evaluate the implementation of environmental, pest management and social safeguard activities of the project with support from other PIU safeguards specialists in place under other Bank and donor financed projects as needed.

C. Sustainability

47. The project's sustainability is reinforced by the Government's strong ownership of the overall project concept, which emerged from a specific high-level request to support rural entrepreneurship and job creation. The project's design builds on and scales up on-going Government programs, as well as the investment initiatives in innovation and cluster development.

48. The sustainability of project investments is expected to be supported by the direct linkage between project investments and private sector and commercial bank financing, which can help ensure services and



investments are directed at viable business activities and show high potential for long-term economic sustainability. The project's investments in capacity building to institutions that deliver SME related business and administrative services are expected to put in place a service delivery model that should allow the institutions to operate on a cost-recovery basis in the future. Institutions providing business incubation and BDS are expected to generate additional value for beneficiaries and allow them to develop models for service delivery that should generate revenue into the future.

49. The results achieved under the project will also generate spillovers as the guarantee and credit line funds will continue revolving in the PFIs beyond the life of the project as the expected repayment of the funds to MoF takes place according to a gradual repayment schedule. The technical sustainability of the credit line will be ensured through provisions of relevant training and hands-on TA to the PFIs. The PFIs will be trained in applicability of the new financial products, assessing the suitability and effectiveness of these new products, and on mitigation of the related risks.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

50. ***Climate Co-benefits.*** Component 1 activities are expected to generate climate co-benefits primarily through climate adaptation measures while component 2 investments are expected to invest in both mitigation and adaptation measures. A summary of anticipated climate co-benefits in the project activities is as follows:



Table 3: Climate Co-Benefits: Project Activities to Support Climate Adaptation and/or Mitigation

Sub-Components/ Activity	Financing Allocation (US\$ m)	Adaptation Measures	Mitigation Measures
Component 1: Rural Enterprise Development (IDA US\$20.0 million)			
1.1 Business Incubation and Mentorship	5.1	<ul style="list-style-type: none"> Disseminate information on the Climate Change adaptation and mitigation measures, organize awareness raising workshops. Strengthen project beneficiaries' knowledge on climate-smart agricultural practices – new varieties, greenhouses, crop diversification, integrated pest management, drip irrigation, post-harvest handling, storage, marketing, and processing 	
1.2 Partnership and Value Chain Development	0.7	<ul style="list-style-type: none"> Bring together value chain stakeholders/beneficiaries to explain the climate change consequences and promote partnerships 	
1.3 Climate Smart and Green Technology Demonstration	5.5	<ul style="list-style-type: none"> Demonstrate climate smart technologies in small- and medium-sized agribusinesses and on farm enterprises in the project regions. Build capacity on innovative technologies that would have a significant impact in the long run on reducing GHG emissions, building resilience, and developing capacity for adaptation to climate change. 	
1.4 Women's Entrepreneurship Development	8.7	<ul style="list-style-type: none"> Provide matching grants to introduce climate change adaptation and mitigation technologies 	
Component 2: Access to Finance (IBRD US\$175.8 million)			
2.1 Credit line for Farmers, agribusinesses, and rural enterprises	146.0	<ul style="list-style-type: none"> Credit Line will support climate-resilient investments in the agricultural and rural sectors Project will target 50% of portfolio is classified as climate smart 	<ul style="list-style-type: none"> Beneficiaries are eligible to borrow for the procurement of farm level ram pumps and solar-powered irrigation pumps and drip irrigation systems
2.2 Partial Credit Guarantees under the State Fund for Support of Entrepreneurship	29.3	<ul style="list-style-type: none"> PCG will provide financial support to the beneficiaries who are affected by the climate change 	<ul style="list-style-type: none"> Beneficiaries are eligible to borrow for the procurement of farm level ram pumps and solar-powered irrigation pumps and drip irrigation systems
2.3 Technical Assistance to Participating Financial Institutions	0.5	<ul style="list-style-type: none"> Build capacity of PFIs' lending specialists on climate change and introduce innovative financing instruments 	



51. **Economic and Financial Analysis.** An economic and financial analysis was undertaken (see Annex 3 for details) and followed a classic cost-benefit analysis framework. The modeling and analytical approach are primarily based on Jenkins, Kuo, and Harberger (2011). The “with project” scenario financial cash flows were developed for each of the three models. Based on these cash flows, standard measures of financial profitability were estimated for each of three appraised interventions: financial net present value (FNPV), financial internal rate of return (FIRR), and modified internal rate of return (MIRR). The financial analysis suggests that viability is expected, as financial profitability measures (FNPV, FIRR, and MIRR) are positive for all proposed new ventures. Standard measures of economic sustainability—economic net present value (ENPV), economic rate of return (ERR), and economic modified internal rate of return (EMIRR)—were estimated to reveal the economic profitability of the proposed interventions. The estimation of Carbon co-benefits remained an integral part of the analysis and proper pricing of Carbon was included in the economic part of the analysis to account for the potential environmental benefits/costs that might accrue through the proposed new ventures.

52. The analysis of the proposed Project's indicative interventions suggests that the REDP is likely to bring economic benefits to Uzbekistan. Keeping in mind analytical limitations in the ex-ante analysis, the results confirm that the REDP is expected to deliver economic benefits that will positively influence society and the country's economy. The main gains will manifest from switching to more modern technological solutions: aquaponic greenhouse, intensive orchard, and modernized textiles production. This switch is likely to bring higher production efficiency and increase the supply of tomatoes, fruits, and textiles. The Project is also expected to deliver more year-round employment options for the rural population.

Table 4. Aggregate Economic Results Lower Carbon Bound

MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in '000 UZS OR %					
Economic					
ENPV	2,901,795,221	7,127,146,320	114,080,037	115,903,304	114,192,238
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in '000 USD OR %					
Economic					
ENPV	276,361	678,776	10,865	11,038	10,875
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%



Table 5. Aggregate Economic Results Upper Carbon Bound

MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in '000 UZS OR %					
Economic					
ENPV	2,866,145,783	7,139,645,099	110,994,253	114,632,687	111,218,157
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in '000 USD OR %					
Economic					
ENPV	272,966	679,966	10,571	10,917	10,592
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%

B. Fiduciary

53. **Financial Management.** The project financial management risk has been assessed as **Moderate** provided the risk mitigation actions are duly implemented by the Implementing Agency (IA). The IA will need to establish a Project Implementation Unit (PIU) with adequate staff and resources (effectiveness condition), and the PIU will be ultimately and solely responsible for financial fiduciary tasks and responsibilities. The IA will also need to develop the Project Operations Manual (POM), with contents and substance satisfactory to the Bank, and which shall be adopted by the project effectiveness. The IA will hire the Financial Management Specialist and a Disbursement Specialist, on the terms of references satisfactory to the Bank, to manage the project on-lending and matching grant disbursement activities. The IA will also need to develop and adopt the Matching Grant Guidelines (to address the fiduciary arrangements for matching grant subcomponents) in the form and contents acceptable to the bank and prior to any disbursements on the Matching Grant related sub-components shall be made (Disbursement conditions).

54. The IA will install a fully functional accounting software to account for project transactions. The Project accounting will be maintained by the PIU using the IPSAS Cash basis accounting standards. The project will submit Interim Financial Reports (IFRs) on a quarterly basis, within 45 calendar days following each reporting quarter. The format of the IFRs will be agreed with the Bank and will include the key financial information (funds inflow and outflows, uses of funds by project components/budget categories, DA reconciliation, etc.). The Project financial statements will be annually audited on the terms of references acceptable to the Bank. The audit report will be furnished to the Bank within 6 months following the audited period and will be publicly disclosed by Bank and by the IA on its official website.

55. The IA will open separate Designated accounts (DA) for each finding source (including sub-accounts in local currency) at a financial institution acceptable to the Bank. The Project Designated and sub-accounts will be used exclusively for the project fund flows and for payments of project eligible expenses and will not be pooled with other, non-project funds. The project will follow the standard disbursement approaches (advance payment,



replenishment to DA, direct payment, and special commitment), and will follow the disbursement instructions (e.g., DA threshold, Direct payment amount limit, frequency of SOE reporting, etc.) which will be depicted in the Disbursement and Financial Information Letter.

56. **Procurement.** All procurement of contracts will be conducted through the procedures as specified in the World Bank's Procurement Regulations for IPF Recipients - Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services dated November 2020. The Guidelines on Preventing and Combating Fraud and Corruption in projects financed by IBRD loans and IDA credits and Grants, dated October 15, 2006, and revised January 2011 and as of July 1, 2016, shall apply to this project. Procurement and contract management processes will be tracked through the Systematic Tracking of Exchange in Procurement (STEP) system.

57. *Summary of the Project Procurement Strategy for Development (PPSD) and the Procurement Plan (PP).* The IA has prepared the project PPCSD along with the PP for the first 18 months of project implementation. The PP will be updated at least annually or as required during project implementation to reflect any substantial changes in procurement approaches and methods to meet actual project implementation needs, market fluctuations, and improvements in institutional capacity. The updated PPs along with the revised PPCSD (if required) will be subject to WB's prior review and no objection. The PPCSD includes a detailed Procurement Risk Analysis and actions to mitigate the procurement risk that is being rated as substantial. If followed properly, and the risks are mitigated, a lower risk rating might be upgraded during project implementation. The preliminary conclusions of PPCSD reveal that for market analysis for procurement packages there is a competitive market both at local and international levels with sufficiently large number of manufacturers and suppliers for procurement under investment components. The nature of the proposed contracts is not particularly complex, and a good level of competition is anticipated among national and international companies depending on the packaging approach that will be decided during completion of PPCSD.

58. *Procurement risk assessment.* WB conducted a procurement capacity assessment using the Procurement Risk Assessment and Management System (P-RAMS). Based on the assessment and taking note of the existing capacity within the IA and the risks associated with procuring a large number of activities, the procurement risk is substantial. Risks identified in the procurement assessment of the IA include: (i) issues with the enforcement of the PPL and other relevant legislative requirements in practice; (ii) possibility of an attempt of influence by government officials on procurement decisions; (iii) difficulties in hiring qualified procurement consultants due to the low salary levels and low attractiveness of civil servant jobs among qualified staff; and (iv) procurement delays. To mitigate these risks, the following actions are recommended: (a) all procurement activities will be carried out following World Bank procurement procedures, including the related prior- or ex-post reviews; (b) the World Bank team will support the IA staff and the procurement consultant to be hired on all procurement matters to ensure that procurement processes are carried out in line with relevant World Bank policies and procedures; (c) the IA will ensure that a qualified procurement consultant is hired to be responsible for the day-to-day procurement activities; (d) the World Bank good governance and anticorruption safeguards, particularly the transparency and disclosure provisions of the IBRD Guidelines, will be promoted and enforced; (e) the Project Procurement Strategy for Development (PPSD) will include a section reflecting the roles and responsibilities, including roles of consultant/experts, for development of good quality TORs and Technical specifications. In



addition, the role of the IA and other involved agencies in designing technical specifications and TORs will be clarified; (f) the POM should have clear deadlines and timelines for each step in the procurement processes for both consultant selection and goods/technical services procurement to avoid unnecessary delays during the implementation.

59. *Use of national procurement procedures.* All contracts for goods, works and consultancy services following national market approach shall use the procedures set out in the Public Procurement Law (PPL) enforced in June 2021. The provisions of the PPL are consistent with the WB Procurement Regulations Section V – Para 5.4 National Procurement Procedures subject to a few conditions specified in PPSD. Further improvement of the 2021 legal and regulatory framework is being carried out GOU. The ongoing reform activities include the development of a full-fledged e-procurement system. The World Bank will update the assessment of the National Procurement Procedures after introduction of a full-fledged e-procurement system that will be adopted for national competition procurement approach under the project.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

60. The proposed operation will support the agriculture and food processing sector, but also handicraft, textile (except primary cotton processing and production) mainly silk production or cotton textile manufacturing at the latter stages of production like sewing, weaving, or apparel manufacturing, tourism and small manufacturing sectors. It will also fund activities such as translating innovative technologies or business models into viable enterprises, innovation start-ups. In addition, the project will include credit line for smaller-scale enterprises below US\$500,000; training program to PFIs on the use of new financial products in lending to horticulture, livestock, silk production, and other rural entrepreneurs' production activities. It is expected that the project will have mostly positive environmental, social and economic benefits as it will indirectly support improving the quality of production and capacity to identify effective agricultural, land, and water management practices. Targets to promote the use of climate adaptation or climate mitigation technologies and practices have been included in the design.

61. From social side, the positive social impacts include establishing new jobs and jobsites; increased income generation for farmers and rural households; strengthened institutional capacity for better agrobusiness planning and practices due to enhanced skills in management of innovative financial schemes using PFIs. However, some potential environmental risks and adverse impacts include the potential use of pesticides and other agrochemicals, risks from operations and maintenances of the agro-food, wastewater discharge, odor and other emissions, and solid and organic waste disposal. On social front, the project potential risks and adverse impacts are primarily related to community disturbance during civil works, risks related to labor and working conditions; and the possibility of excluding some farmers from full participation in project benefits either due to lack of information or benefit allocation decisions. E&S procedures to be put in place under the project have to take into account these contextual risks, manage and monitor them as they relate to project-supported activities, and provide adequate attention to capacity-building activities of the involved implementing institutions. Significant reputational risks are also present given the prior history of forced evictions, forced and child labor in the country. These need to be mitigated with sufficient awareness, capacity-building, and monitoring systems during the project implementation.

62. The environmental and social (E&S) risks of the project have been assessed and rated at the concept stage and reconfirmed at the appraisal stage as substantial. Of the Environment and Social Standards (ESSs), seven are relevant to the project. These are: ESS 1) Assessment and Management of Environmental and Social Risks and Impacts; ESS 2) Labor & Working Conditions; ESS 3) Resource Efficiency and Pollution Prevention and Management; ESS 4) Community Health and Safety; ESS 6) Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 9) Financial Intermediaries; and ESS 10) Stakeholder Engagement and Information Disclosure.

63. The project will finance activities in 10 regions (Tashkent, Syrdarya, Jizzak, Samarkand, Kashkadarya, Surkhandarya, Navoiy, Bukhara, Khorezm and Karakalpakistan). The project proposed potential activities and



downstream activities could cause various and direct and indirect environmental risks and adverse impacts at small and medium scale. These impacts can be easily mitigated by applying best construction practices and relevant mitigation measures, but in some activities (which would involve or generate hazardous materials and wastes, or potential use of pesticides and mineral fertilizers) environmental risks and adverse impacts may be more significant. Nevertheless, such use is expected to be well defined and can be mitigated with proper waste and pest management plans and adequate training on handling materials in place. Regarding OP7.50, International Waterways, the project will not support any new irrigation system expansion or finance any activity that emits pollutants into an international waterway and/or tributaries. It will only support activities that involve maintenance or rehabilitation of the existing system to improve water use efficiency.

64. The Ministry of Agriculture's FVREDP PIU and the Ministry of Economy and Poverty Reduction (MEDPR) have prepared an Environmental and Social Management Framework (ESMF) to guide principles, rules and procedures for the preparation of environmental and social screening, the site specific ESIA and ESMPs, as well as their review, management and monitoring procedures including COVID-19 related measures. Consultations around the ESMF took place in January 2022 and the document was publicly disclosed on February 1, 2022. The ESMF also provides specific guidance on workers Occupational Health and Safety (OHS) measures and safety of communities during the implementation of works. Training and capacity building needs are part of the ESMF and the ESCP. In addition, the ESMF contains a chapter on pest management including a list of pesticides banned by national law and provide a checklist to determine if and when site-specific ESIA and ESMPs or whether Pest Management measures are required for proposed activities. When required, those ESIA and ESMPs will be prepared, consulted upon, and disclosed subject to review and approval by the Bank. In the case of works within biodiversity presence area, biodiversity protection plan will be integrated to ESIA or ESMP. Though unlikely, works may take place in the cultural heritage areas, Cultural Heritage Protection measures will be part of ESIA and ESMP whenever required. Where required, a stand-alone Biodiversity Management Plan (BMP) will be prepared and implemented. These sites-specific documents will constitute an integral part of bidding documents for contractors. Site-specific ESIA and ESMPs will be timely disclosed and discussed with the public.

65. Some social risks of perceived exclusion from project benefits can occur if commercially potential proposers and farmers would not be eligible or have direct access to the financial products enabled by the credit lines, or partial credit guarantee mechanism under Component 2. While it is most common to consider women, disabled, youth, or low-income as groups at greater risk of exclusion, the project will address risks through awareness campaigns, transparent communication about project scope, clear eligibility and selection criteria, and application procedures. No significant risks related to labor influx or community health and safety are expected as most project workers will be recruited locally. The Sexual Exploitation Abuse/Sexual Harassment (SEA/SH) risk is rated through Social Risk Screening Tool of the Bank as low mostly due to the status of national gender-based violence (GBV) legislation, gender norms, and the rural location of most project activities. SEA/SH criteria for business practices will be provided to project participants through training and awareness raising workshops. A number of social risks exist in the broader context of the agricultural sector and relate to information constraints as well as overall ability of smaller farmers to partake in project benefits, and to the capacity of state and financing institutions to monitor labor and working conditions across rural enterprises. There is a low to moderate a risk of unequal uptake of good ag practices to be promoted, under "Enterprise Development", among farmers intended as project beneficiaries, especially in areas with ethnic minority communities and in remote areas. E&S procedures will be put in place to take into account these contextual risks, manage and monitor them as they relate to



project supported activities, and provide adequate attention to capacity-building activities. Enlist regional government experts for specific sectors, such as regional agricultural extension, and assist with promoting and training in good practices for sector in which enterprise is classified.

66. A Stakeholder Engagement Plan (SEP) was publicly disseminated and disclosed as part of the preparation process and will guide management of social and environmental risks together with the ESMF. Social risks under each sub-loan will be screened, mitigation measures proposed, and monitored via the following steps: initial social screening and risk categorization of the sub-project; preparation of the Environmental and Social Management Plan (ESMP) or ESMP Checklist, and where applicable, Labor Management Plans (LMP) and other relevant sub-management plans (e.g. traffic safety, community engagement, emergency response plan, etc.); inclusion of requirements for PFIs and credit beneficiaries to adhere to environmental and social standards will be included in the prepared ESMF and project Labor Management Procedures (LMP), and in the SEP.

67. **Citizen engagement.** Citizen engagement is embedded in the project design of the service delivery component of the project and will continue throughout the life cycle of the project. During project implementation, the following citizen engagement mechanisms will be employed: (i) focus group meetings will ensure participatory planning and decision-making of the business advisory and business development support services – inviting (potential) service users, specifically youth and women and enabling them to voice their needs and concerns regarding this support (how can the mentorship ideally support them? what are most significant challenges for business innovation and startups?); (ii) regular women entrepreneur dialogues (at least twice a year) to collect women’s feedback and empower them to evaluate and monitor the small micro-grants program and entrepreneurship support program (women entrepreneurs will be able to provide feedback on the program, their functionality (ease of access, transparency, quality). The dialogues will also help to better understand the women entrepreneurs’ needs and obstacles regarding starting a new business, will share results of previous dialogues and provide feedback on actions taken to address any concerns expressed, and (if necessary) provide women the opportunity to join working groups to improve; (iii) and a Grievance Redress Mechanism to enable male and female service users to submit complaints, which will be promptly registered and reviewed for mutually satisfactory resolution and will include different channels of grievances such as email, direct, telephone, and social networks to ensure easy access to the service. Quarterly reporting will include information about the number of grievances received and resolved and will flag major concerns raised. The project operations manual will detail the design and implementation processes/ procedures of all citizen engagement mechanisms, including the staffing and budget to implement them.

68. **Gender.** Rural women in Uzbekistan face multiple barriers to entrepreneurship and employment, ranging from social and cultural norms to access to finance and markets. There are structural barriers to women’s participation in the labor force, and rural women from low income segments are particularly vulnerable. Gender disparities in Uzbekistan manifest most strongly in women’s positions in the labor force and employment as well as women’s access to opportunities and resources. Project activities will target women’s participation across all components with sub-component 1.4 dedicated to support the gender and low-income women needs in launching new business activities. The project will also monitor women’s participation in the project through indicators to track: (i) the number of enterprises supported under the project that are female led (baseline 0, target 500); and (ii) the number of additional jobs generated by enterprises supported under the project – female (baseline 0, target 5,000). Also, the project will provide technical assistance in promoting the gender and carry out awareness raising training in the project regions.

V. GRIEVANCE REDRESS SERVICES

69. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

70. The overall project risk has been assessed Moderate with the following key risks:

71. **Macroeconomic risk and sector strategy risk are both rated as moderate: The impacts of COVID-19 and ongoing reform may negatively affect vulnerable populations or sectors.** Macro-economic pressures caused by economic impact of COVID-19 may contribute to higher inflation or impact interest rates. Reforms to state-owned enterprises and state-owned banks may also result in market disruptions as adjustments are made to business lines or as private sector actors enter to provide goods and services. These are not expected to be significant, however, and other operations such as DPOs are also expected to contribute to a smoother transition and reform process. Agricultural and financial sector reform dialogue is on-going, and the project is expected to provide support for strengthening both sectoral reform agendas.

72. **Institutional capacity and readiness may impact implementation progress but is considered a moderate risk.** As the implementing responsibility has moved to MEDPR requiring the creation of a new implementation unit, additional institutional capacity will need be built. As a mitigation measure, project implementation will prioritize institutional capacity issues at project start and technical assistance will be provided at the very start of implementation in order to build capacity. Risks will also be mitigated by the project's design, which will utilize service providers and draw on the implementation capacity developed in the FVREDP PIU.

73. **Environment and Social risk are considered substantial due to the nature and extent of activities and potential adverse impacts.** The project will utilize the screening and monitoring mechanisms described in the ESMF to mitigate any risk of child and forced labor among MSMEs supported by the project and sub-loan agreements will also require the immediate termination and full repayment of any sub-loans found to be associated with forced labor.



74. **Technical design is rated as moderate.** The project incorporates lessons learned from the first phase and has built in collaboration with the FVREDP PIU for knowledge sharing and coordination. The project will follow up on institutional reforms recommended under FVREDP for the partial credit guarantee scheme. The project will provide all necessary TA and training to project participants to bring international best practice to project implementation.

75. **The Fiduciary risk is rated as moderate,** subject to the adoption of the risk mitigation actions as described in Annex 2.

76. **Stakeholder risk is rated as moderate.** The project has undertaken consultations as part of project preparation and the Stakeholder Engagement Plan has been developed and disclosed. The project's design is following a demand driven approach, with the majority of project activities determined by stakeholders themselves. In addition, the project's GRM will collect feedback and respond in a timely manner.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Uzbekistan

Second Rural Enterprise Development Project

Project Development Objectives(s)

The project development objective is to support the expansion of rural enterprise activity, investments, and job creation in regions supported by the project.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Support the expansion of economic activity							
Number of enterprises supported under the project (Number)		0.00	0.00	500.00	1,000.00	1,500.00	2,000.00
Number of micro enterprises supported under the project (Number)		0.00	0.00	0.00	350.00	500.00	700.00
Number of enterprises - Youth (Number)		0.00	0.00	0.00	200.00	300.00	400.00
Number of enterprises - Female led (Number)		0.00	0.00	0.00	300.00	400.00	500.00
Increase in total revenues of enterprises supported under the project (Percentage)		0.00	0.00	10.00	10.00	10.00	15.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Increase in revenues of micro enterprises supported under the project (Percentage)		0.00	0.00	10.00	10.00	10.00	15.00
Support to job creation							
Beneficiaries of job-focused interventions (CRI, Number)		0.00	0.00	500.00	1,000.00	1,500.00	2,000.00
Beneficiaries of job-focused interventions - Female (CRI, Number)		0.00	0.00	200.00	300.00	400.00	500.00
Number of additional jobs generated by enterprises supported by the project (Number)		0.00	0.00	3,000.00	5,000.00	8,000.00	10,000.00
Number of additional jobs generated by enterprises supported under the project - female (Number)		0.00	0.00	2,000.00	3,000.00	4,000.00	5,000.00
Number of jobs generated by enterprises supported by the project – Youth (Number)		0.00	0.00	500.00	1,000.00	2,000.00	2,500.00
Improved climate resilience							
Amount of water, gas and electricity saved due to introduction of smart technologies by enterprises supported by the project - (Percentage)		0.00	0.00	0.00	5.00	8.00	10.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Water saved due to introduction of smart technologies by enterprises supported by the project-M3 (Percentage)		0.00	0.00	0.00	5.00	8.00	10.00
Gas saved due to introduction of smart technologies by enterprises supported by the project-M3 (Percentage)		0.00	0.00	0.00	5.00	8.00	10.00
Electricity saved due to introduction of smart technologies by enterprises supported by the project-kWT (Percentage)		0.00	0.00	0.00	5.00	8.00	10.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1:							
Number of formal partnerships or value chain contract arrangements in the project area (Number)		0.00	0.00	4.00	10.00	12.00	20.00
Number of beneficiaries trained (Number)		0.00	0.00	1,000.00	2,000.00	4,000.00	5,000.00
Number of beneficiaries		0.00	0.00	250.00	500.00	1,000.00	1,500.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
trained - Female (Number)							
Number of beneficiaries trained – Youth (Number)		0.00	0.00	500.00	1,000.00	2,000.00	2,500.00
Number of districts where rural business development services are being delivered under the project (Number)		0.00	0.00	10.00	15.00	20.00	20.00
Number of market promotion events carried out (Number)		0.00	0.00	3.00	6.00	8.00	10.00
Number of new business startups (Number)		0.00	0.00	25.00	50.00	75.00	100.00
Number of new business start-ups supported under the project - Female (Number)		0.00	0.00	5.00	10.00	15.00	20.00
Number of new start-ups supported by the project - Youth (Number)		0.00	0.00	5.00	10.00	15.00	20.00
Percentage of beneficiaries satisfied with services provided under the project (Percentage)		0.00	0.00	75.00	75.00	75.00	75.00
Percentage of beneficiaries satisfied with services provided under the project – Female (Percentage)		0.00	0.00	75.00	75.00	75.00	75.00
Component 2: Access to Finance							
Volume of financing provided through participating financial institutions (in millions) (Amount(USD))		0.00	20.00	50.00	100.00	125.00	145.00
Volume of financing		0.00	10.00	15.00	25.00	30.00	36.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
allocated to loan size less than \$50,000 (millions of USD) (Amount(USD))							
Percent of financing that is classified as climate smart (Percentage)		0.00					50.00
Number of sub-loans (Number)		0.00	0.00	200.00	400.00	500.00	600.00
Number of sub-loans - Female (Number)		0.00	0.00	20.00	30.00	40.00	50.00
Number of sub-loans - Youth (Number)		0.00	0.00	20.00	30.00	40.00	50.00
Loan Performance (% in good standing) (Percentage)		0.00	95.00	95.00	95.00	95.00	95.00
Volume of financing provided through partial credit guarantees (in millions) (Amount(USD))		0.00	10.00	20.00	29.30	40.00	58.60
Component 3: Project Management							
Share of complaints addressed (Percentage)		0.00	100.00	100.00	100.00	100.00	100.00



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of enterprises supported under the project	Measures the total number of enterprises supported under the project throughout component 1 (TA) and component 2 (sub-loans and partial credit guarantees)	Bi-annual	Progress reports	Regular PIU M&E data collection	PIU
Number of micro enterprises supported under the project	The total number of micro enterprises supported under the project. Micro enterprises are defined using the definition in Uzbekistan by Ministry of Economy which is an enterprises with less than 20 employees.	Semi-annual	Commercial banks, innovation centers, incubators, PIU under MEPR records	Data reconciled from commercial banks reports, innovation centers, incubators, PIU under MEPR records	PIU under MEPR
Number of enterprises - Youth	The number of enterprises of all types owned/led by youth	Semi-annual	Commercial banks, project data	Reports from commercial banks, project data	PIU under MEPR
Number of enterprises - Female led	Number of enterprises of all sizes owned/led by women	semi-annual	Commercial banks and project records	Commercial banks and project records	PIU under MEPR
Increase in total revenues of enterprises supported under the project	Measures change in enterprise activity as a result of project support.	Baseline, midterm and final	Survey	Survey	PIU



		evaluation			
Increase in revenues of micro enterprises supported under the project	the percentage change in total revenues of micro enterprises supported under the project. Micro enterprises are defined using Ministry of Economy definition of enterprises with less than 20 employees.	Baseline, mid-term and final evaluation	Project survey data	Project survey data	PIU under MEPR
Beneficiaries of job-focused interventions					
Beneficiaries of job-focused interventions - Female					
Number of additional jobs generated by enterprises supported by the project	Number of total additional jobs generated by enterprises supported under the project across all components.	Baseline, mid-term and final evaluation	Project reports and periodic surveys.	Surveys of all supported enterprises	PIU
Number of additional jobs generated by enterprises supported under the project - female	The total number of jobs created by enterprises supported under the project employing women, number	semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project data, data from surveys carried out by the project	PIU under MEPR
Number of jobs generated by enterprises supported by the project – Youth	The total number of jobs created by enterprises supported under the project employing youth, number	Semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project records, survey data	PIU under MEPR



Amount of water, gas and electricity saved due to introduction of smart technologies by enterprises supported by the project -	Average efficiency savings generated in water, gas and electricity as a result of introduction of smart technologies. Calculated based on a weighted average of sub-indicators.	Semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project records, survey data	PIU under MEPR
Water saved due to introduction of smart technologies by enterprises supported by the project- M3	Percentage change in water efficiency savings water as a result of introduction of smart technologies based on cubic meters of water (M3)	Semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project records, survey data	PIU under MEPR
Gas saved due to introduction of smart technologies by enterprises supported by the project- M3	Percentage change in gas efficiency as a result of introduction of smart technologies – in cubic meters (M3)	Semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project records, survey data	PIU under MEPR
Electricity saved due to introduction of smart technologies by enterprises supported by the project- kWT	Percentage change in electricity efficiency as a result of introduction of smart technologies –in kWT	Semi-annual	Commercial banks, project data, project surveys	Reports from commercial banks, project records, survey data	PIU under MEPR



Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of formal partnerships or value chain contract arrangements in the project area	The number of formal partnerships or value chain contract arrangements in the project area supported by the project, number	Semi-annual	Commercial banks, project data	Reports from participating commercial banks, project data	PIU under MEPR
Number of beneficiaries trained	The total number of beneficiaries receiving average of 10 days of training over project lifetime, number	Semi-annual	Project records	Project administrative records	PIU under MEPR
Number of beneficiaries trained - Female	The total number of female beneficiaries receiving on average 10 days of training under the project	Semi-annual	Project data	Project administrative records	PIU under MEPR
Number of beneficiaries trained – Youth	The total number of youth beneficiaries receiving on average 10 days of training under the project, number	semi-annual	Project data	Project administrative records	PIU under MEPR
Number of districts where rural business development services are being delivered under the project	The number of districts where rural business development services are being delivered under the project	Semi-annual	Project data	Project data	PIU under MEPR
Number of market promotion events carried out	The total number of market promotion events carried out under the project, number	Annual	Project data	Project records	PIU under MEPR



Number of new business startups	The number of new business start-ups supported by the project, number	Semi-annual	Business incubators, innovation centers, AIFSA	Project data from business incubators, innovation centers, commercial banks	PIU under MEPR
Number of new business start-ups supported under the project - Female	The number of new start-ups supported under the project, number	Semi-annual	Commercial banks, innovation centers, business incubators	Data collected from commercial banks, innovation centers, business incubators	PIU under MEPR
Number of new start-ups supported by the project - Youth	The total number of new youth initiated start-ups supported by the project, number	Semi-annual	Commercial banks, innovation centers, business incubators	Data from commercial banks, innovation centers, business incubators	PIU under MEPR
Percentage of beneficiaries satisfied with services provided under the project	Share of beneficiaries who are satisfied with the access to and quality of services provided under the project, percentage	Annual	Project surveys	Beneficiary surveys	PIU under MEPR
Percentage of beneficiaries satisfied with services provided under the project – Female	The share of the number of female beneficiaries who are satisfied with the services provided under project to the number of all female beneficiaries	Annual	Surveys	Survey data	PIU under MEPR



Volume of financing provided through participating financial institutions (in millions)	The total volume of financing provided through participating financial institutions, US\$	Semi-annual	Commercial banks	Reports from commercial banks	PIU under MEPR
Volume of financing allocated to loan size less than \$50,000 (millions of USD)	The total volume of financing provided to micro enterprises by participating financial institutions, US\$	Semi-annual	Commercial banks	Reports from commercial banks	PIU under MEPR
Percent of financing that is classified as climate smart					
Number of sub-loans	Measures the number of sub-loans issued by participating financial institutions	Semi-annual	PFI's	Reports from PFI's	PIU under MEPR
Number of sub-loans - Female	Measures share of sub-loans supporting Female entrepreneurs or female owned enterprises	Semi-annual	Commercial banks	Reports from commercial banks	PIU under MEPR
Number of sub-loans - Youth	The total number of sub-loans provided to young entrepreneurs	Semi-annual	Commercial banks	Reports from commercial banks	PIU under MEPR
Loan Performance (% in good standing)	Non performing loan limit set at no more than 5% of the outstanding loan portfolio.	Semi-annually	PFI's, PIU under MEPR	financial reports	PIU under MEPR
Volume of financing provided through partial credit guarantees (in millions)	Measures the volume of lending leveraged by partial credit guarantees based on an assumption that project funds are leveraged at least twice.	Semi-annual	State Fund for Support to Entrepreneurship	Progress reports	PIU under MEDPR



Share of complaints addressed	Percentage of complaints received under the project that are addressed	Annual	PIU under MEPR data	PIU under MEPR data	PIU under MEPR
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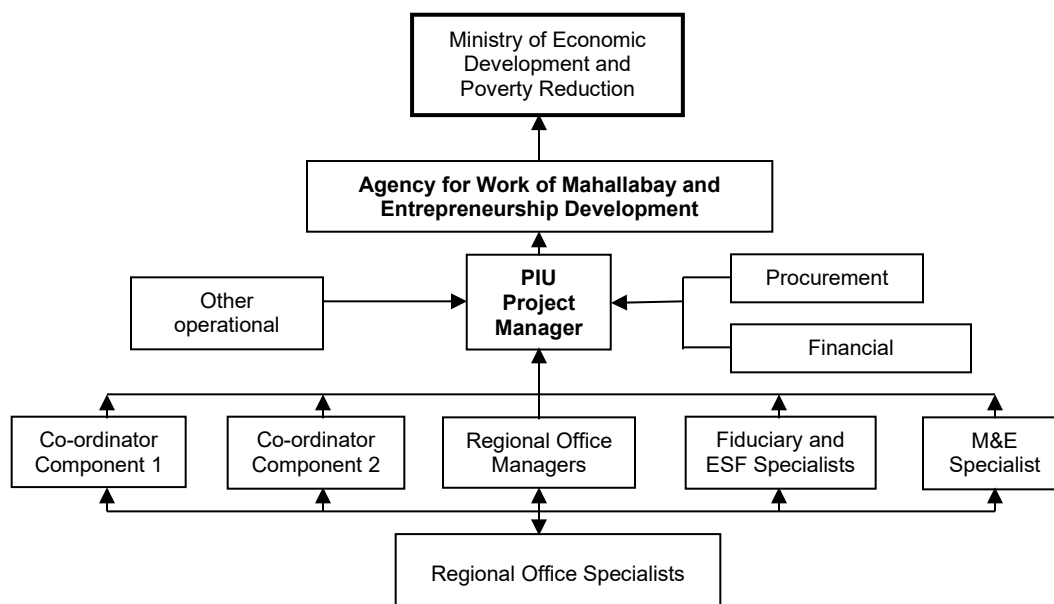
ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Uzbekistan **Second Rural Enterprise Development Project**

1. The Government has confirmed that REDP will be implemented by PIU under MEDPR. The World Bank team carried out a fiduciary assessment of the new PIU to be established under MEDPR to determine the adequacy of their fiduciary arrangements. The PIU under MEDPR will need to meet the minimum fiduciary requirements of the World Bank and additional staff and training will be required in order to act as an implementing agency of the proposed project.
2. The proposed project is expected to align to the same implementation arrangement as FVREDP but will establish its own project implementation unit. The project design will ensure sufficient focus on strengthening the PIU's capacity for project management, monitoring and evaluation. The PIU will put in place a staffing mechanism for: (i) overall project management, as well as contract administration, procurement, safeguards, and financial management; and (ii) a robust performance-based Management Information System (MIS), beneficiary satisfaction survey, data collection, and reporting on key performance output and impact indicators, through baseline surveys, participatory assessments, mid-term review and final evaluation.
3. Within MEDPR, the PIU will be located within the Agency for the Work of Mahallabay and Entrepreneurship Development (the Agency). This Agency operates as a dedicated agency of MEDPR with the mandate to implement Government programs in the area of entrepreneurship. The Agency reports to the Minister of MEDPR and will take on responsibility for providing oversight over day-to-day operation of the PIU.
4. The PIU will work closely with implementing partners who will be responsible for implementing specific activities within the project in the following areas:



Figure 1. Overall management structure of the project



Financial Management

5. The FM arrangements of the Agency are considered generally acceptable for implementation of the Project provided the due and timely development and adoption of the specified risk mitigation activities as stated in the below Table1. The Agency has no prior experience in implementing the project funded by the World Bank, and thus the Agency will need to develop and enhance the fiduciary capacity of the Agency to ensure the project is implemented in line with both the local legislation and the World Bank procedural requirements. The Fiduciary risk as assessed as **Moderate**, subject to the adoption of the risk mitigation actions:

Table 1. Risk mitigation actions

Action	Responsibility	Due Date
1. The Borrower has established a Project Implementation Unit with relevant and adequate resources within Agency and on the terms of references satisfactory to the Bank.	MEDPR through Agency	Effectiveness condition
2. The Project Operations Manual has been adopted by the Borrower in form and substance satisfactory to Bank.	MEDPR through Agency	Effectiveness condition
3. The Borrower has adopted the Matching Grant Guidelines (Fiduciary Manual), in the form and substance satisfactory to the Bank, for financing Grants under the Sub-component 1.4: Women's Entrepreneurship development (IDA US\$8.7 million)	MEDPR through Agency	Disbursement condition
4. The Borrower has adopted the Credit Line Guidelines, in the form and substance satisfactory to the Bank, for financing for the Sub-component 2.1: Credit line for Farmers, agribusinesses, and rural enterprises for climate-resilient investments (IBRD US\$ 146 million).	MEDPR through Agency	Disbursement condition
5. The Borrower has adopted the Partial Credit Guarantee Guidelines, in the form and substance satisfactory to the Bank, for financing the activity	MEDPR through Agency	Disbursement condition



Action	Responsibility	Due Date
under the Sub-component 2.2: Partial Credit Guarantees under the State Fund for Support of Entrepreneurship (IBRD US\$ 25.0 million) - Upgrade of the exiting Partial Credit Guarantee Guidelines under the FVREDP is also acceptable.		
6. The Project Implementation Unit has installed a functionale accounting software accounting software for managing the accounting and financial reporting of the project	MEDPR through Agency	Within 60 days from project effectiveness

6. The Agency will be in charge of maintaining the accounting system and keeping accounting records for the project transactions with the help of separate accounting system to be acquired and installed shortly after project effectiveness (Legal covenant – 60 days form the project effectiveness). The project accounting records will be maintained in accordance with the International Public Sector Accounting Standards, Cash basis standard. The Agency will need to duly and timely develop and adopt required guidelines and manuals to address the implementation and fiduciary requirements for overall project implementation and management (Project Operations Manual), for on-lending activities (Credit Line Guidelines), partial credit guarantee activities (Partial Credit Guarantee Guidelines) and grant related activities (Matching Grant Guidelines). The Agency will submit quarterly un-audited financial reports (IFRs) to the Bank. The Audit of the Project financial statements will be carried out for each financial year and at the closing of the project by an eligible audit firm, in accordance with the TORs, agreed with the Bank. The Project audit report will be publicly disclosed by the Agency and the World Bank on their respective websites. No entity audits are required.

7. The disbursement arrangements will follow the traditional disbursement mechanisms, which include direct payments, replenishments to the designated account, reimbursements and special commitments. The minimum application size and designated account ceiling will be specified in the Project disbursement letter. The Agency will open a Designated Account in USD for each funding source (one for IBRD and one for IDA) in the financial institution acceptable to the World Bank and may also open transit account(s)/sub-account(s) in Uzbek soums as may be necessary (for payment of eligible expenditures in local currency). Funds flows related to the SFSED will be managed via a separate Dedicated account to be opened and managed throughout the project implementation at a financial institution acceptable to the Bank. All project accounts (Designated, dedicated and subaccounts) will be used exclusively for the Project funds flows and payments of eligible expenditures and will not be pooled with non-project funds. The Agency will be in charge of planning the Project disbursements and preparation of withdrawal applications and making disbursements.

Procurement

8. All procurement of contracts will be conducted through the procedures as specified in the World Bank's Procurement Regulations for IPF Recipients - Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services dated November 2020. The Guidelines on Preventing and Combating Fraud and Corruption in projects financed by IBRD loans and IDA credits and Grants, dated October 15, 2006, and revised January 2011 and as of July 1, 2016, shall apply to this project. Procurement and contract management processes will be tracked through the Systematic Tracking of Exchange in Procurement (STEP) system.

9. *Procurement risk assessment.* The WB has conducted a procurement capacity assessment using the Procurement Risk Assessment and Management System (P-RAMS). Based on the assessment and taking note of the existing capacity within the IA and the risks associated with procuring a large number of activities, the procurement risk is substantial. Risks identified in the procurement assessment of the IA include: (i) issues with the enforcement of the PPL and other



relevant legislative requirements in practice; (ii) possibility of an attempt of influence by government officials on procurement decisions; (iii) difficulties in hiring qualified procurement consultants due to the low salary levels and low attractiveness of civil servant jobs among qualified staff; and (iv) procurement delays. To mitigate these risks, the following actions are recommended: (a) all procurement activities will be carried out following World Bank procurement procedures, including the related prior- or ex-post reviews; (b) the World Bank team will support the IA staff and the procurement consultant to be hired on all procurement matters to ensure that procurement processes are carried out in line with relevant World Bank policies and procedures; (c) the IA will ensure that a qualified procurement consultant is hired to be responsible for the day-to-day procurement activities; (d) the World Bank good governance and anticorruption safeguards, particularly the transparency and disclosure provisions of the IBRD Guidelines, will be promoted and enforced; (e) Project Procurement Strategy for Development (PPSD) will include a section reflecting the roles and responsibilities, including roles of consultant/experts, for development of good quality TORs and Technical specifications. In addition, the role of the IA and other involved agencies in designing technical specifications and TORs will be clarified; (f) POM should have clear deadlines and timelines for each step in the procurement processes for both consultant selection and goods/technical services procurement to avoid unnecessary delays during the implementation.

10. *Use of national procurement procedures.* All contracts for goods, works and consultancy services following national market approach shall use the procedures set out in the Public Procurement Law (PPL) enforced in June 2021. The provisions of the PPL are consistent with the WB Procurement Regulations Section V – Para 5.4 National Procurement Procedures subject to a few conditions specified in PSD. Further improvement of the 2021 legal and regulatory framework is being carried out GOU. The ongoing reform activities include the development of a full-fledged e-procurement system. The World Bank will update the assessment of the National Procurement Procedures after introduction of a full-fledged e-procurement system that will be adopted for national competition procurement approach under the project.

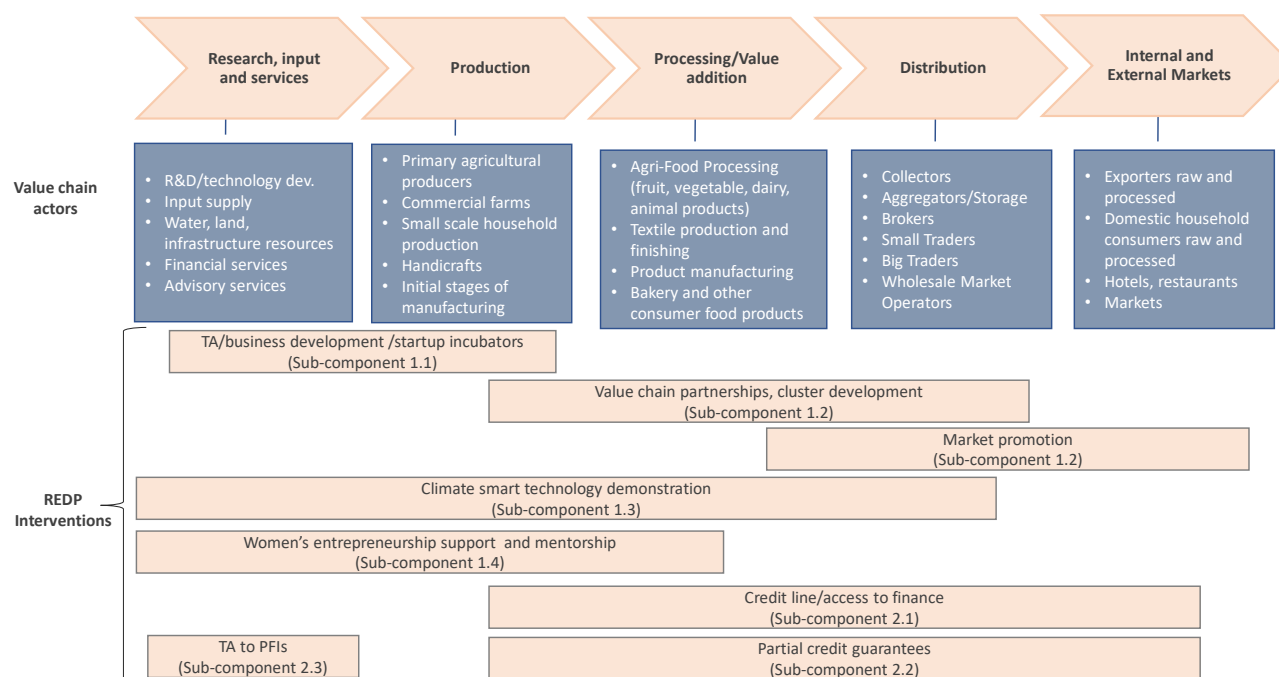


ANNEX 2: Detailed Project Description

COUNTRY: Uzbekistan Second Rural Enterprise Development Project

1. The project's development objective is to support the expansion of rural enterprise activity and job creation in regions supported by the project. This is intended to contribute to the larger goal of building greater economic and job opportunities and facilitating private sector-led economic growth. Project financing will be directed at key constraints facing enterprises: (i) rural entrepreneurship with a focus on business incubation and mentorship; (ii) partnership and value chain development to strengthen value chains and productive partnerships between producers and processors, producers and traders, among others; (iii) Climate smart technology demonstration to support the introduction of innovative technologies that could have a significant impact in the long run on reducing GHG emissions, building resilience, and developing capacity for adaptation to climate change; (iv) Women's entrepreneurship development to initiate more specific entrepreneurship support interventions that can better address women's particular needs, including low-income women who face greater constraints in starting new business activities; and (v) improving access to non-financial and financial services among micro and small enterprises in high potential sectors (agri-food, tourism, textiles/apparel, light manufacturing).

Contribution of REDP Activities Along the Value Chain



2. The project will place a strong focus on inclusion (targeting youth and women); innovation (deploying technology, digitization and management models to improve effectiveness, efficiency and scale); incubation (facilitation and



mentorship for developing an entrepreneurial ecosystem); and linking rural areas with emerging economic clusters in urban areas and other economic clusters in the country and the region.

3. REDP will build on the design of the FVREDP retaining the core focus on supporting entrepreneurship and expanding access to non-financial and financial services. The project will take a two-track approach - facilitating the establishment and growth of MSMEs through the provision of technical support and advisory services (Component 1) and addressing liquidity constraints and risk exposure within the financial sector to increase MSME and agricultural lending (Component 2).

Project Components

4. **Component 1: Enterprise Development (IDA US\$ 20.0 million).** The component will facilitate the establishment and growth of farms, agribusinesses, and rural enterprises in the targeted rural areas through the provision of technical support and facilitation.

5. **Sub-Component 1.1: Business Incubation and Mentorship (US\$ 5.1 million).** Financing will be provided for business advisory and business development support services designed to incubate and mentor various classes of micro and small entrepreneurs. REDP will continue to establish business incubator hubs as an anchor for service delivery using service providers and the availability of existing physical facilities to house business incubator hubs. Financing will also be provided to innovation startup competitions targeting youth in order to promote innovation and provide more in-depth mentorship and support to incubate new businesses.

6. **Sub-Component 1.2: Partnership and Value Chain Development (US\$ 0.7 million).** The project will promote building of value chains and productive partnerships between producers and processors, producers and traders, among others. The second sub-component will finance market/demand research for the specific typed of product to be sold, training of the chain participants, technical advice on inputs and technologies, sales and marketing advice, and producer participation in national and international trade shows to promote investments and exports, and to improve quality of production, marketing and investment decisions. The project will also organize visits of large buyers from key countries to Uzbekistan (e.g., a group of supermarket procurement managers and buyers from leading import companies). The investments under the sub-component will be driven by a value chain assessment undertaken in the first year to determine priorities. This initial value chain assessment will incorporate criteria around economic potential as well as the potential to strengthen inclusion of vulnerable groups into value chains and SMEs.

7. **Sub-Component 1.3: Climate Smart and Green Technology Demonstration (US\$ 5.5 million).** This sub-component activities will aim to demonstrate climate smart technologies in small- and medium-sized agribusinesses and on farm enterprises in the project regions. The project will support the introduction of innovative technologies that will have a significant impact in the long run on reducing GHG emissions, building resilience, and developing capacity for adaptation to climate change. This could also include renewable energy technologies that have been shown to be impactful and cost-efficient but have not been widely demonstrated and adopted in Uzbekistan, such as bio-gas digesters, solar water heaters, solar photovoltaics, biomass, wind and micro-hydroelectric installations. Further preparation and dissemination of information on the demonstrated technologies will be supported through workshops, hands-on demonstrations, peer-to-peer learning and materials supported under this sub-component. Technology demonstrations



will be selected based on the prioritization process initiated under sub-component 1.2, which will identify value chain and SME priorities. Contracted service providers and international partners will implement demonstration activities. Contracts with international scientific institutions such as those under the Consultative Group for International Agricultural Research (CGIAR) institutions such as the International Water Resources Management Institute (IWMI) will also be explored.

8. **Sub-Component 1.4 Women's Entrepreneurship Development (US\$ 8.7 million).** The fourth sub-component will enable the project to develop more specific entrepreneurship support interventions that can better address women's particular needs, including low-income women who face greater constraints in starting new business activities. The sub-component will scale up a pilot project financed through the World Bank Japan Social Development Fund (JSDF), Enhancing Economic Opportunities for Rural Women Project (EEORW). This pilot project utilizes a group-based approach to provide a package of services tailored to the needs of women in low-income households in rural areas in 112 mahallas in 8 districts in Ferghana and Jizzakh with implementation led by the Ministry of Mahalla and Family Affairs. The methodology is centered on mobilizing groups of women and using groups as an entry point for providing the information, skills, assets, experience, and networking and a small micro-grants program to launch business activities for those successfully completing a viable business plans and mobilizing co-financing. REDP financing will be used to target support for women's livelihood groups in approximately 20 additional districts, using the same targeting methodology as EEORW – which is based on analysis of demographic and vulnerability data for rural villages, including the population size, number of female-headed households, number of unemployed women and their education levels, number of low-income households, and number of persons with disabilities. Matching Grants Guidelines will be a condition of disbursement and will be modeled on the current grant manual in use under EEORW. Matching Grants will also support adoption of climate adaptation technologies²¹; criteria for classification of climate adaptation technologies will be defined in the Matching Grant Guidelines.

9. **Component 2: Access to Finance (IBRD US\$ 175.8 million).** The component will address key constraints to access finance faced by farmers, agribusinesses and other beneficiaries engaged in agriculture and rural economic activities and proposes to support the expansion of two financing instruments: a credit line and partial credit guarantees. Micro- and small farmers and agribusinesses operating in Uzbekistan's agriculture sector lack access to longer-term financing and suitable products and services due to the funding structure of financial institutions, limited use of appropriate lending methodologies and higher risks associated with the sector. The provision of long-term funding for the sector and suitable credit enhancement mechanisms can help alleviate these structural constraints. Moreover, financial products that are tailored to the agriculture production cycles and to the needs of the smaller enterprises, in particular start-ups, are in short supply, highlighting the need to further support financial institutions in developing specific products/services for this segment and in building capacity in new lending methodologies.

10. **Sub-component 2.1: Credit line for Farmers, agribusinesses, and rural enterprises for climate-resilient investments (US\$ 146 million).** The objective of the credit line will be to address funding constraints faced by financial institutions and support lending to farmers, agribusinesses, and rural enterprises in new project areas. The Credit Line will support climate-resilient investments in the agricultural and rural sectors and will target at least 50 percent of the

²¹ Such as equipment that utilizes renewable energy or is energy efficiency or water saving; or agronomic or production practices that promote improved input efficiency, and adaption to heat and drought conditions.



credit line portfolio be classified as “climate smart”.²² The Credit Line will be compliant with World Bank Guidance for Financial Intermediary Financing, and will provide financing through one General Window and one limited-scale special Window. The General Window will finance individual loans in the amount up to US\$500,000 to meet the needs of small and medium agribusinesses for climate-resilient investments who are generally operating at this scale. The Special Window, using more streamlined procedures, will provide loans up to US\$50,000 targeting micro and small beneficiaries. This special window is deemed necessary to fill the credit gap of micro- and small enterprises who have not been able to access previous credit lines. The micro and small farming and agribusiness enterprises play a particularly important role in rural economic diversification, poverty reduction and income generation. The Special Window will also cater for the financing needs of the startups and women entrepreneurs supported under component 1. The initial allocation between the Windows is: 75 percent of the Credit Line allocated for the General Window, with the Special Window receiving the remaining Credit Line allocation. The Participating Financial Institutions would need to draw on both, the General Window and the Special Window, catering to the needs of micro-entrepreneurs to ensure a well-diversified sub-loan portfolio.

11. Key terms and conditions of the Credit Line:

- (i) *Choice of currency.* The funds will be available both in Uzbek Sums and US Dollars, based on the demand of the sub-borrowers.
- (ii) *The maximum sub-loan/lease size* under the individual entrepreneurship support window will be up to US\$500,000 and up to US\$50,000 under the microfinance window. Working capital loans will be up to US\$125,000 for up to 24 months.
- (iii) *Maturity of funds to the PFIs:* Up to 15 years, with 5 years of grace period.
- (iv) *The maximum maturity* of the sub-loans/leases will not exceed 10 years or the amortization period of the asset, whichever is shorter. The actual size and maturity of the loans/leases will depend on the type of investment financed, profitability of the activity, cash-flows generated, collateral, and other banking considerations.
- (v) *Maximum financing share:* The project will finance up to 100 percent of the sub-loans/leases in US Dollars, while requiring 20 percent co-financing from the PFIs for UZ Soum sub-loans/leases. The sub-borrowers will be required to contribute additional 20 percent of the sub-project financing.
- (vi) *The interest rate to the PFIs* will be finalized in negotiations with the MOF, based on the World Bank's onlending rate to the Republic of Uzbekistan. Tentatively, the formula to be used for setting the interest rates is proposed to be:
 - (a) The interest rate for Subsidiary Loans denominated in US Dollars shall be equivalent to the base rate, which will be the prevailing interest rate at which the Borrower (i.e., Republic of Uzbekistan) shall have received loan proceeds from the World Bank plus a spread set by the Borrower from time to time, and agreed to by the Bank, to compensate the Borrower for the administrative costs associated with the Subsidiary Loan.
 - (b) The interest rate for Subsidiary Loans denominated in UZ Soums shall be equivalent to the rate of refinancing of the CBU (the interest rate will vary in accordance with the rate of refinancing of the CBU).

²² In order for credit line investments to be classified as climate smart they will be screened and classified as utilizing approaches that reflect use of climate adaptation technologies and/or management methods (climate adaptive agricultural practices) or climate mitigation (use of low emission agricultural practices). Examples of practices and technologies are described in <https://www.fao.org/climate-smart-agriculture-sourcebook/en/>.



This rate will cover all payments to the IBRD/IDA, administrative expenses of credit line, as well as potential currency risks of the Republic of Uzbekistan.

12. Additional requirements to the PFIs:

- (i) The micro-finance window, estimated at 30 percent of the credit line allocation, will have to be disbursed by the PFIs concurrently with the larger loans, to ensure that the 30:70 percent ratio is maintained.
- (ii) The Credit Line beneficiaries will have to comply with the national legislation on child and forced labor, per provisions of the operational manual.
- (iii) A requirement for accessing value chain/cluster financing by a sub-borrower under this credit line will be an upstream or down-stream contractual relationship within the value-chain, to ensure the viability of the productive linkages financed under the credit line.

13. The PFIs will set their own interest rates and repayment terms to final sub-loans/lease beneficiaries based on their banking considerations. The on-lending interest rate from PFIs to end borrowers will be sufficient to cover (i) cost of funds, (ii) administrative expenses, (iii) loan loss risk, and (iv) a profit margin to compensate the PFI for taking the credit risk. This will be stated in the Credit Line Operations Manual. The PFIs will carry out full appraisal of sub-loans/eases and sub-borrowers based on the agreed criteria and will bear the full risk of subsidiary loan repayment.

14. Credit Line Investment Guidelines (CLIG) will provide the detailed eligibility criteria, terms and conditions of the financing under the various windows, as well as responsibilities of the implementing parties (PFIs, sub-borrowers and the PIU under the MEDPR).

15. Each subsidiary loan agreement between the MOF, PIU and the PFI will be signed for a specific amount, based on the demand. Progress of disbursements will be monitored by the PIU under MEDPR and the World Bank team, to recommend flexibility in amending the subsidiary loan agreement amounts in case when some PFIs are much slower than others. Given the likelihood that a number of the PFIs will qualify for participation, it will help ensuring the competitive environment necessary for the sub-borrowers to benefit from competitive terms and conditions of the financing.

16. Withdrawals from the Credit Line. Periodically, as agreed between the PFI and the PIU under MEDPR, PFIs will prepare Statements of Expenditure (SOE), in the agreed format, listing the already financed sub-loans, as well as sub-loans approved by its Credit Committee but not yet financed.²³ The SOE will be submitted together with the one-page Sub-loan Information Sheet (SIS) for each sub-loan, which will contain the key terms and conditions of the proposed sub-loan. The PIU under MEDPR will review the list of sub-loans and the one-page summaries for every sub-loan to check the eligibility of the sub-loan against the criteria under the project (it is only a "technical" review by the PIU under MEDPR; the financial appraisal of the sub-loan, loan structuring and all banking considerations lie with the PFI). Upon approval, the money will be transferred to the PFI.

²³ In cases when the PFI does not have an opportunity to extend financing due to the short maturity of the available financing or other considerations.



17. Prior review of sub-loan applications by the World Bank will be carried out in the following cases: (i) each qualified PFI will submit the first three sub-loan applications irrespective of the amount; and (ii) sub-loan applications for financing of the cluster arrangements.

18. The following simplifications are proposed to support smaller farmers and agri-businesses: (i) streamlining the documentary requirements, especially for loans below US\$50,000; (ii) strictly enforcing application of the agreed prior and post-review formats; (iii) submitting the Statements of Expenditure for the sub-loans up to US\$50,000 in a table format, indicating some key parameters; (iv) digitizing the sub-loan application process including environmental and social safeguards; and (v) encouraging the use of the refinancing facilities for small loans. The project would encourage the accreditation of Banks – public and private - with a clear strategic orientation and proven capacity to reach out to micro- and small enterprises in rural areas. This may include the accreditation of Micro Credit Organizations on a pilot basis, either directly or indirectly through participating banks.

19. **Mobilization of PFIs.** In order to become a PFI, commercial banks have to qualify under a due diligence procedure in accordance with a set of agreed operational, financial and management criteria, and have to sign a tri-partite Subsidiary Loan Agreement (SLA) with the MOF representing the Republic of Uzbekistan and the PIU under MEDPR. In order to maintain its eligibility as a PFI, the commercial banks have to meet the said criteria at all times. The potential PFIs are individually appraised, through a due diligence procedure, during which particular attention will be given to overall lending and risk management capabilities, financial and portfolio performance, and compliance with IBRD/IDA environmental and social standard (ESS9) for Financial Intermediaries. The PFI must have satisfactory financial and management structure, a satisfactory risk-based capital adequacy, an acceptable asset quality and lending performance, adequate liquidity, an environmental and social management system (ESMS), and the organization, management and technical staff and other resources required for the efficient carrying out of the operations. If a commercial bank fails to pass the due diligence or has a negative due diligence outcome, the commercial bank has the right to re-apply upon its estimated readiness to meet the eligibility criteria based on the results of audited statements and other relevant documents.

20. **Sub-component 2.2: Partial Credit Guarantees under the State Fund for Entrepreneurship (US\$29.3 million).** The project will expand the partial credit guarantee mechanism under FVREDP given that collateral requirements for rural and agricultural lending remain high in Uzbekistan, revealing a persistent risk aversion of Participating Financial Institutions (PFIs) towards this segment. If well-designed, partial credit guarantees (PCGs) can be an effective tool to address financial institutions' risk aversion towards underserved sectors, especially if the mechanism is accompanied by other efforts to increase access to finance. Many countries have expanded their credit enhancement mechanisms to address the impacts of the COVID-19 pandemic, which have exacerbated pre-existing challenges. In this context, the REDP will allocate funds to expand the current PCG mechanism under FVREDP, conditional on the concurrent implementation of an institutional strengthening agenda, identified in the technical assistance undertaken under FVREDP. Institutional and regulatory reform measures should be adopted by the State Fund for Entrepreneurship Development to align the PCG scheme with international practices, optimize the use of the scheme, and promote its long-term sustainability.



21. These reform measures also respond to feedback from current PFIs, currently engaged in FVREDP especially with regards to the design and operational features of the existing scheme. Based on ongoing TA under FVREDP and initial conversation with PFIs, some challenges and areas of further improvements might include:

- a. *Low levels of awareness*: The level of awareness about the benefits of the PCG scheme appear to be low and overshadowed by the State Fund's interest rate compensation scheme. Additional efforts to raise awareness about the PCG scheme might be needed;
- b. *Incentives for PFIs to utilize guarantees*: While guarantee applications have increased consistently since the inception of the scheme, especially during the COVID-19 crisis, the additionality and benefits of the scheme for PFIs are perceived to be low given the design of the existing guarantee. Additionality, in this context it is defined as the need to expand lending to borrowers who would not otherwise have access to credit without the guarantee. The current level and type of coverage does seem to provide sufficient incentives for PFIs. The State Fund provides a coverage of up to 50 percent, which decreases along with loan repayment. In addition, PFIs can only make a claim after initial legal proceedings to execute the collateral. These factors combined with low non-performing loans in Uzbekistan, in practice, limit PFIs' ability to make a claim against the State Fund and effectively use the PCG scheme for its intended use, which is to alleviate collateral constraints faced by the underserved segments;
- c. *Improving risk management and governance*: Currently, risk management is done on a limited basis, with the State Fund relying on PFIs' systems and policies. However, the State Fund is currently upgrading its IT systems and capacity to collect information from PFIs, including repayment and non-performing loans, which would provide an important foundation for improvements in risk management. Sound risk management policies and systems, combined with adequate governance structures, are critical for the sustainable development of the scheme.

22. Financing under the second sub-component will be used to capitalize the partial credit guarantee scheme within the State Fund for Entrepreneurship Support. As was the case under the FVREDP, financing will be provided in two tranches, with the second tranche released once the volume of guarantees issued is at least two times of the value of the first tranche, to ensure the scheme is leveraging funds before receiving new resources. REDP will support TA to facilitate institutional reforms in the State Fund under sub-component 2.3. These reforms, which could be sequenced during the REDP project implementation, could require changes in relevant resolutions and decrees.²⁴ The Partial Credit Guarantee Guidelines will provide the detailed eligibility criteria, and terms and conditions of the financing under the PCG scheme, as well as responsibilities of the implementing parties (PFIs, sub-borrowers and the State Fund for Entrepreneurship).

²⁴The State Fund for Support of Entrepreneurship was established by specific legislation - the Presidential Resolution No. 3225 under the Cabinet of Ministers. In August 2019, the State Fund was transferred to the SME Agency under the MEDPR by decree No. UP-5780. The State Fund is governed by Resolution of the Cabinet of Ministers No. 28 (January 2020). In February 2021, the resolution governing the SME agency was amended also introducing changes to the State Fund.



Box 1: The State Fund for Entrepreneurship's Partial Credit Guarantee Activities²⁵

Established in 2017, the State Fund for Support of Entrepreneurship Activities aims at providing financial assistance to private MSMEs in Uzbekistan. Under the Agency for the Work of Mahallabay and Entrepreneurship Development under the Ministry of Economic Development and Poverty Reduction (MEDPR), the agency supports firms primarily through interest rate compensation scheme and partial credit guarantees (PCGs). The State Fund provides PCGs to participating financial institutions (PFIs) of up to 50 percent of loan amount, not exceeding UZS 8 billion (~US\$ 750,000) with a one-time one percent fee paid upfront by the borrower. The scheme supports vulnerable population with entrepreneurial activities, private individual entrepreneurs and private small businesses in any sector.

The provision of PCGs have expanded but the scheme remains untested. Since its inception until March 2021, the scheme has issued more than 8,000 PCGs in the amount of UZS 6.4 trillion, supporting UZS 16.5 trillion in loans (equivalent to 12 percent of loans extended to MSMEs between 2018-2020). Roughly 60 percent of PCGs were issued in 2020 alone, when borrowers were allowed to use both interest rate subsidies and PCGs at the same time due to the COVID-19 pandemic. Despite this progress, the utilization of the scheme has been fairly low with few claims been made so far by PFIs, which suggest that PFIs most likely are not lending to borrowers who would not otherwise have access to credit without the guarantee.

The State Fund is going through an organizational restructuring, having taken initial steps to strengthen its operations. In February 2021, the regulations on the Agency for the Work of Mahallabay and Entrepreneurship Development and the State Fund were amended to increase flexibility in decision-making, allow the simultaneous use of instrument, and introduce new support mechanisms for MSMEs including training and microfinance. Under new management since early 2021, the fund is in the process of implementing organizational changes and institutional strengthening reforms. These include increase in staffing, introduction of independent members in the Executive Board, establishment of new dedicated departments for risk management, internal audit, M&E, and IT, and improvements in the operational features of the PCG scheme. The fund is also exploring long-term options for increasing the autonomy of the PCG scheme and potentially attracting private investors in the long-term.

23. Sub-component 2.3: Technical Assistance to PFIs and the State Fund for Support to Entrepreneurship (US\$0.5 million). Training will be provided to the commercial banks to introduce innovative financing instruments such as digital financial services and value chain finance modalities for agricultural and rural enterprises. The training program would focus on the use of new financial products to target clients engaged in horticulture, livestock, silk production and other rural entrepreneurs' production activities, evaluating the suitability and effectiveness of these new financial products and mitigating the possible risks associated with lending to these sub-sectors. This training will be complementary to, and built into, the upcoming training program financed by the Horticulture Development Project (HDP) to the PFI lending staff in a number of areas, including fundamentals of lending to the agricultural sector; credit analysis and forecasting of capital flows; risks related to the financing of collection of raw materials and processing system; lending to the horticulture, livestock and silk producers, and others.

24. The project will provide TA to facilitate institutional reforms under SFSE and could include activities focusing on institutionalizing risk management systems and policies, reviewing design of guarantee features and implementation aspects, strengthening the M&E framework, and supporting continued dialogue on long-term structural reforms related to the scheme's operational and financial autonomy, stronger governance arrangements, and independent supervision,

²⁵The State Fund for Support of Entrepreneurship Development was established by specific legislation - the Presidential Resolution No. 3225 under the Cabinet of Ministers. In August 2019, the State Fund was transferred to the SME Agency under the MEDPR by decree No. UP-5780. The State Fund is governed by Resolution of the Cabinet of Ministers No. 28 (January 2020).



which will be important building blocks for promoting the sustainable expansion of the scheme, including beyond the project cycle.

25. **Component 3: Project Management (IBRD US\$3.75 million).** This component would support the implementation, management, monitoring and evaluation of the project. A PIU will be established under the Agency for the Work of Mahallabay and Entrepreneurship Development and will provide overall project coordination and implementation support, including implementation planning, technical supervision, fiduciary management (financial management, procurement), environmental and social safeguards implementation, and monitoring and evaluation. The component will provide funding for goods, technical assistance, consulting services, training and incremental operational costs for the PIU under MEDPR and other relevant agencies as appropriate to facilitate implementation of the project (including the areas of financial management, procurement, disbursement, and monitoring and evaluation).

Table 1. Project Costs (USD millions)

(US\$ Million)

	The World Bank		Beneficiaries		Total	
	Amount	%			Amount	%
1. Enterprise development	20.0	10.0%	0.2	0.5%	20.2	8.4%
1.1 Business incubation	5.1	2.6%		0.0%	5.1	2.1%
1.2 Partnership and Value Chain development	0.7	0.4%		0.0%	0.7	0.3%
1.3 Climate Smart technology demonstration	5.5	2.7%		0.0%	5.5	2.3%
1.4 Women's Entrepreneurship Support	8.7	4.3%	0.2	0.5%	8.9	3.7%
2. Access to Finance	175.8	87.9%	43.1	99.5%	219.7	90.2%
2.1 Credit Line and Pilot financial services	146.0	73.0%	29.2	66.3%	175.2	71.9%
2.2 Partial Credit Guarantee	29.3	14.7%	14.7	33.3%	44.0	18.0%
2.3: TA to PFI and Partial Credit Guarantee	0.5	0.3%				
3. Project Management	3.75	1.9%	-	0.0%	3.8	1.5%
Front end fees (required for IBRD loans)	0.45					
Total Project Costs	200.0	100.0%	44.1	100.0%	243.6	100.0%



ANNEX 3: Economic and Financial Analysis

COUNTRY: Uzbekistan Second Rural Enterprise Development Project

Background

1. **Uzbekistan is in the process of reforming its economic, trade, and agricultural policies.** Uzbekistan is one of the biggest and the most populous countries of Central Asia, with a total population of about 33.6 million (2019 est.) and a GDP of US\$57.73 billion (2019 est.).²⁶ Despite its annual growth of roughly 5 percent in the years 2004-2015, the country remains in the group of lower-middle-income countries with an average per capita GDP of US\$6,240 in 2018 (an increase from US\$2,913 in 2004).²⁷ In 2017, the government started to implement significant reforms aiming at a radical switch towards market orientation and more open international trade. At the macroeconomic level, one of the most important reforms was removing exchange rate controls and the devaluation of the Uzbekistan currency against the US dollar. In the continuing effort to access the World Trade Organization (WTO), Uzbekistan facilitated trade at the international level by eliminating several prices, production, and trade controls and lowering import tariffs. At the agriculture production level, the country began to move away from its traditional focus on cotton production and started prioritizing its horticulture, livestock, and textiles value-added production providing funding and institutional support to these subsectors.²⁸

2. **Uzbekistan is naturally and geographically endowed with promising horticultural production.** Agriculture in Uzbekistan remains an important sector for employment, with about 25 percent of the population engaged in agriculture-related activities (2019 est.).²⁹ Consequently, the sector remains a significant source of income for the national population. Traditionally, the country has been associated with its cotton and wheat cultivation. However, Uzbekistan is also known for its fruits and vegetables. Also, Uzbekistan's geographical location and historical connection to Russia³⁰ and Kazakhstan provide it with important export markets for its fruits and vegetables (fresh and processed). Furthermore, the country also shows signs of comparative advantage in the horticulture sector concerning other countries, suggesting its potential for becoming an important regional horticulture supplier to world markets.

3. **Horticulture production generates employment in Uzbekistan.** It has been proven that the switch from cotton and wheat to horticulture production can also improve the country's performance through employment creation. The estimates from the Horticulture Development Project (HDP) have shown that in the case of the establishment of greenhouses, on average, 9.2 new jobs per hectare (ha) are created (or 21 new jobs per US\$1 million of investment). In the case of orchards, an intensive orchard creates on average 43 new jobs for every US\$1 million of investment.³¹

²⁶ Source: <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=UZ>

²⁷ Source: <https://www.adb.org/sites/default/files/publication/605746/uzbekistan-job-creation-economic-growth.pdf>

²⁸ Source: <https://www.rvo.nl/sites/default/files/2020/04/Market-study-on-plant-propagation-material-Uzbekistan.pdf>

²⁹ Source: <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=UZ>

³⁰ Note: The Russian language is still widely known in Uzbekistan, which facilitates trade.

³¹ Source: <https://openknowledge.worldbank.org/bitstream/handle/10986/34526/Uzbekistan-Agri-Food-Job-Diagnostic.pdf?sequence=1&isAllowed=y>



4. **Textile production has traditionally been important for Uzbekistan.** The textiles sector in Uzbekistan is one of the most important sectors for the entire the economy. Private and public investment resulted in significant increase in textiles production and exports. Between 2005-2010, the export of cotton fiber was significantly larger than the export of processed textiles (by several times). However, the situation changed around 2018 when the export of processed cotton textiles increased to US\$ 1.54 billion with only US\$ 0.22 billion of raw fiber exports. In that year the export switched from cotton yarn to value-added textile products. This development in the textiles industry is largely attributed to the development of clusters.³²

5. **The micro, small and medium enterprises (MSMEs) in Uzbekistan are engines for growth and development.** As prior evidence in Uzbekistan and elsewhere shows, vivid micro, small and medium-size privately-run businesses remain the most critical building blocks of national economies. The role of this sector is especially vital in developing countries as the MSMEs can create jobs and increase the income of the poorest, including women and youth. Consequently, the MSMEs can positively influence the overall economic growth and country development progress. Therefore, MSMEs in Uzbekistan are considered a vital tool for facilitating national economic growth and development. However, the availability of investment funding for MSMEs remains an essential obstacle that prohibits their thriving. Poor access to advisory services and sparse business development support constitutes additional non-financial barriers for Uzbekistan's MSMEs to become engines of national progress.

6. **REDP is designed to provide financial and non-financial support for the rural MSMEs and financial institutions in Uzbekistan.** The proposed PDO of the REDP is to support the expansion of rural enterprise activity and job creation in regions targeted by the Project. The Project will build on experiences from the Ferghana Valley Rural Enterprise Development Project (FVREDP). The REDP aims to provide the necessary flow of funding (longer-term loans or credit guarantees) to deliver the resources required to boost the MSMEs sector, especially in the horticulture, dairy/livestock, and textiles. REDP will support the Government of Uzbekistan's "Strategy for Agriculture Development of Uzbekistan in 2020-2030."

7. **Due to the demand-driven nature of the proposed REDP's interventions, a non-exhaustive sample of potential interventions has been selected for quantitative EFA.** The demand-based nature of the Project does not allow the appraisal of all possible examples of MSMEs that will receive the REDP financial and non-financial support. Consequently, the following analysis is based on three indicative interventions that are likely to be implemented through the funding provided by the REDP: (i) Model 1: Provision of a loan for the establishment of tomatoes greenhouse; (ii) Model 2: Provision of a loan for the establishment of the intensive orchard; (iii) Model 3: Provision of a loan for the establishment of textile production (quilting production). Table 1 below contains more details about the rationale behind the appraised REDP interventions.

8. **The demand-based nature of the Project does not allow the establishment of the "Without Project Scenario (WOP)" for each of the proposed interventions.** Therefore, in this analysis, it was assumed that each of the proposed loans and interventions (Model 1, 2, and 3) appraised in this analysis constitutes a new venture. Consequently, the estimated financial profitability and economic sustainability measures are treated as incremental values. While this

³² Source: <https://documents1.worldbank.org/curated/en/305731601271791257/pdf/Policy-Dialogue-on-Agriculture-Modernization-in-Uzbekistan-Cotton-Textile-Clusters-in-Uzbekistan-Status-and-Outlook.pdf>



approach is not ideal, it remains the only methodologically sound and viable option for estimating potential benefits coming from the support that will be delivered through the REDP.

Methodology and Methods

9. **This Economic and Financial Analysis (EFA) employs a classic cost-benefit analysis (CBA) framework.** The modeling and analytical approach are primarily based on Jenkins, Kuo, and Harberger (2011).³³ However, due to the assumption about the Project delivering funding for new ventures,³⁴ the analysis of the “With Project (WP)” scenarios is treated as incremental analysis and no “Without Project (WOP)” scenarios were developed.

10. **The first step of the analysis was the construction of three sets of WP financial cash flows.** First, the WP financial cash flows were developed for each of the three appraised Project’s interventions. These cash flows include all potential costs and revenues that will accrue to investors after they receive the financing through the REDP. Based on these cash flows, standard measures of financial profitability were estimated for each of three appraised interventions: financial net present value (FNPV), financial internal rate of return (FIRR), and modified internal rate of return (MIRR). The financial cash flows were prepared in individual and aggregate terms (for an assumed number of ventures of each type)

11. **In the second step of the analysis, all financial cash flows were adjusted to their economic values using a set of self-calculated Conversion Factors (CFs).**³⁵ The economic flows of resources for the individual interventions include the costing of greenhouse gas (GHG) emissions³⁶ to account for environmental impacts. Standard measures of economic sustainability—economic net present value (ENPV), economic rate of return (ERR), and economic modified internal rate of return (EMIRR)—were estimated to reveal the economic profitability of the proposed interventions.

12. **The final step of the analysis was a sensitivity analysis.** Several “what-if” scenarios were analyzed to see how the ENPV, EMIRR, and ERR might be influenced if some of the most important variables change.

³³ G.P. Jenkins, C-Y. Kuo, and A. Harberger (2011), “Cost-Benefit Analysis for Investment Decisions.” Accessed in French translation at <https://ideas.repec.org/s/qed/dpaper.html>

³⁴ Note: This assumption was necessary as there was no available data that could help establish “WOP” scenarios.

³⁵ A CF is defined as a ratio of a commodity’s economic price to its financial price.

³⁶ The GHG emissions costing was based on the World Bank’s Guidance Note from November 12, 2017.

Source: <https://documents1.worldbank.org/curated/en/621721519940107694/pdf/2017-Shadow-Price-of-Carbon-Guidance-Note.pdf>



Table 1. Summary of expected benefits under models used in analysis

Model	With Project (WP) Scenario treated as New Venture	Sectoral issues before REDP funding	Intervention and expected gains under WP	Target Audience of Proposed Interventions
Model 1	Provision of a loan for intensive production of tomatoes in a modern (aquaponics) greenhouse.	<p>* Low production efficiency, low yield, issues with quality of output (inconsistent quality), loses due to changing weather patterns (field tomatoes production or plastic foil tunnel production).</p> <p>* Seasonality of production that prohibits year-round production and negatively affects volume.</p> <p>* Low soil fertility issues.</p> <p>* Field production that is good mainly for domestic market. Low employment (mainly seasonal).</p>	<p>Intervention: Provision of a loan financing necessary for establishing modern greenhouse tomatoes production.</p> <p>Expected gains: Increase in volume and efficiency. Year-round production. Increase in quality of tomatoes. Production mainly for export markets. Creation of new year-round employment opportunities.</p>	Willing investors: Possibly larger and better organized individual farms or clusters.
Model 2	Provision of a loan for the establishment of the intensive orchard production.	<p>* Low production efficiency, low yield, issues with quality of output (inconsistent quality), loses due to changing weather patterns and poor management of old orchards.</p> <p>* Production mainly for domestic market. Use of disease-prone domestic grafts.</p>	<p>Intervention: Provision of loan financing necessary for the establishment of intensive orchard.</p> <p>Expected gains: Increase in volume of production and efficiency. Increase in quality of fruits. Production for domestic and export markets. Revenue increase. Use of disease-resistant, improved grafts. Creation of new jobs.</p>	Willing investors: Possibly larger and better organized individual farms or clusters.
Model 3	Provision of a loan for the establishment of textile production (quilting).	<p>* Low-technology production due to the lack of funding for purchase of modern equipment (inconsistent quality, labour intensive production).</p> <p>* Production mainly for domestic market using low tech solutions.</p>	<p>Intervention: Provision of loan financing necessary for the establishment of modernized textile production.</p> <p>Expected gains: Increase in volume and efficiency. High-tech solutions. Increase in quality of produce. Production for domestic and export markets. Creation of new year-round employment opportunities.</p>	Willing investors: Individual farms (due to relatively low funding requirements (around US\$ 100,000 per production facility)).

Modeling Assumptions

13. Assumptions were used to estimate the standard measures (FNPV, ENPV, FIRR, MIRR, ERR, EMIRR) of the appraised REDP indicative interventions were as follows:

14. In the first step, the analysis was pursued on each of the three proposed individual loans and investment types. The individual financial and economic analysis was pursued separately on three assumed interventions. As mentioned earlier, each individual intervention was assumed to constitute a new venture. Consequently, the presented financial and



economic estimates are treated as incremental ones. The quantitative data necessary for the modeling for each of these three interventions were obtained from the financial sheets of the previous successful loans delivered under the FVREDP.

15. **The aggregate analysis provided estimates assuming the establishment of 20, 30, and 50 ventures of each type of Model 1, 2, and 3.** To provide the estimates of the projects' potential aggregate financial revenues and economic benefits, an assumption of the establishment of 20, 30, and 50 new ventures of each type of Model 1, 2, and 3 was used, respectively. Considering individual loan levels that will potentially be delivered for each of these intervention types, this would add up to the total estimated REDP's US\$ 154.19 million (out of the US\$ 200 million planned as a total potential loan delivered through the REDP).

16. **Model 1: Tomatoes greenhouse establishment.** In this intervention, it was assumed that the new venture would produce tomatoes in a modern, aquaponic greenhouse setup. Tomatoes (2 types) will be produced on 13 hectares (ha) total, with 90 percent of the output destined for export markets. Ten percent of the total annual production was assumed to be sold in the domestic market. Furthermore, it was assumed that in the first year, the greenhouse becomes operational but produces only for half of the year as the other half is necessary for its construction. Consequently, in the first year (2022), the revenues and costs were considered at 50 percent. The core of the loan funding is assumed to be destined to construct the greenhouse and purchase the necessary greenhouse equipment.

17. **Model 2: Intensive orchard establishment.** In this intervention, it was assumed that the modern-type, intensive orchard would be established on 251.2 ha. The orchard will produce a mix of fruits (cherry (56 ha), sour cherry (37.48 ha), peach (89.60 ha), apple (30.80 ha), pear (6.70 ha), and plum (30.62 ha)). The output will be sold in domestic (70 percent) and export (30 percent) markets. The core of the loan funding is assumed to be used to establish irrigation and purchase additional land and seedlings.

18. **Model 3: Textiles' production (quilting).** This intervention assumed that technologically modernized textile plant would produce two types of textiles: quilted fabric and quilted leatherette. The production from this plant is assumed to be destined for the export (25 percent) and domestic market (75 percent). The loan funding (US\$ 100,000 per plant) would be used to purchase the necessary equipment (modern computerized quilting machines) to establish the plant.

19. **A timeframe of 20 years was assumed and used to calculate interventions' profitability and sustainability measures.** The Project's five years (2022–27) were assumed for implementation as per the expected loan disbursement. However, a more extended timeframe for constructing financial cash flows and economic resource flows was used, as per the standard analytical approach. The twenty years (2022–2042) for the analysis were chosen as an appropriate analytical timeframe.

20. **January 1, 2022 was assumed as the starting time of the project.** This assumption was essential to set up a construction schedule for greenhouses, orchard and textile's production, financial cash flows, economic resource flows, depreciation, and investment loan schedules.

21. **Corporate tax levels.** Following on details from previous loans delivered under the FVREDP, the following rates for income tax were modeled:



- a. **Model 1: Tomatoes greenhouse:** It was assumed that these new ventures, in all cases, are income tax and property tax-exempt. However, when applicable, they need to pay land tax and water tax. Also, it was assumed that they are responsible for VAT (15 percent) on domestic sales.
- b. **Model 2: Intensive orchard:** It was assumed that these new ventures, in all cases, are obliged to pay 15 percent income tax. They also need to pay property tax, land tax, water tax, and VAT (15 percent) on domestic sales.
- c. **Model 3: Textiles' production:** It was assumed that these new ventures are obliged to pay 15 percent VAT on domestic sales, 15 percent income tax, property tax, and water tax, but they are exempt from paying land tax.

22. **Depreciation.** Depreciation schedules were also developed for each venture. It was assumed that tomatoes greenhouses are income tax-exempt; therefore, depreciation did not affect its income taxation or cash flows. In intensive orchard and textile's production, depreciation schedules were developed and used to estimate appropriate income tax levels. Generally, whenever applicable, the following depreciation time and levels were assumed:

- a. for greenhouse equipment: 7 years (at 15 percent for hot house capital equipment and 5 percent for greenhouse construction),
- b. for greenhouse construction: 7 years at 5 percent,
- c. for sewing machines: 5 years at 15 percent.

23. **The loan with a preferential interest rate for prospective investors was assumed for each proposed WP intervention type.** The following values of loans were assumed in the modeling process:

- a. **Model 1: Tomatoes Greenhouse:** UZS 65.76 billion (US\$ 6.26 million), with assumed total loan funding for five years @19 percent, with a one-year repayment grace period (2022). Monthly loan repayments were assumed, with the first repayment scheduled for January 2023. Annual loan repayment was established at UZS 20.47 billion (US\$ 1.95 million/year). The loan value (UZS 65.76) was assumed to be at 70 percent of the total funding necessary to establish greenhouse production, with a down payment of 30 percent (UZS 28.18 billion (US\$ 2.68 million)) coming from the investor(s). It was also assumed that investors will have the necessary down payment amount.
- b. **Model 2: Intensive Orchard:** UZS 8.37 billion (US\$ 797.38 thousand) with assumed total loan funding for five years @19 percent, with a one-year repayment grace period (2022). Monthly loan repayments were assumed, with the first repayment scheduled for January 2023. Annual loan repayment of UZS 2.61 billion (US\$ 248.21 thousand per year) was established. The loan value was assumed to be at 70 percent of the total funding necessary to establish intensive orchard with a down payment of 30 percent (UZS 3.59 billion (US\$ 341.73 thousand)) coming from the investor(s). It was also assumed that investors will have the necessary down payment amount.
- c. **Model 3: Textiles' Production:** UZS 735 million (US\$ 70 thousand) with assumed total loan funding for five years @12 percent, with a one-year repayment grace period (2022). Monthly loan repayments were assumed, with the first repayment scheduled for January 2023. Annual loan repayment of UZS 196.20 million (US\$ 18.69 thousand/year) was established. The loan value was assumed to be at 70 percent of the total funding necessary to establish textiles' production, with a down payment of 30 percent (UZS 315 million, (US\$ 30 thousand)) coming from the investor(s). It was also assumed that investors will have the necessary down payment amount.

24. **The estimates on GHG emissions were established.** The GHG/ CO₂ volumes were estimated using EX-ACT software (in the case of Model 1 and 2) and estimated electricity-related volume of CO₂ emissions associated with



modernized textiles production. The emissions in the case of all three models were priced using lower and upper bound Carbon pricing as per the WB's 2017 Note.³⁷ The priced emissions were included in the economic resource flows sheets in each model to internalize the potential costs or benefits that might accrue to the economy once the proposed interventions are put in place. Therefore, the potential positive or negative project's GHG externalities were accounted for in the economic analysis.

25. **Several macroeconomic variables were also assumed for the purpose of this analysis.** The domestic inflation rate was assumed to be 9.8 percent (2022 est.)³⁸, and the US inflation rate was kept at 2.50 percent (2022 est.).³⁹ Both rates were kept constant in the analysis. The real exchange rate of the UZS to the US dollar (US\$) was held at UZS 10,500 = US\$1.⁴⁰ The financial and economic discount rates were assumed to be 12 percent. The Foreign Exchange Premium (FEP) was calculated and established at 2 percent. The Value Added Tax (VAT) was assumed to remain at its current level of 15 percent. Transportation costs (port–market and market–port) were assumed at 5 percent of the shipment's value, and handling costs at 5 percent.

Results

26. **The results of the analysis show that each of the proposed new ventures is likely to deliver positive financial revenues and economic benefits to potential investors.** Calculated over 20 years with a 12 percent discount rate, the results indicate that all proposed interventions will have positive incremental financial revenues and economic benefits (assuming for the purpose of incremental estimates that all these interventions are new ventures), although the economic results differ somewhat depending on whether the lower or upper carbon value is used for GHG emissions.⁴¹

27. **The financial analysis results.** Tables 2 and 3 summarize individual and aggregate financial analysis results. The individual financial analysis results for each venture are:

- **Model 1: Tomatoes greenhouse:** The financial/incremental FNPV is estimated at UZS 111.08 billion (US\$ 10.58 million) over 20 years with an FIRR of 30 percent and MIRR of 18 percent.
- **Model 2: Intensive orchard:** The financial/incremental FNPV is estimated at UZS 180.99 billion (US\$ 17.24 million), with an FIRR of 44 percent and MIRR of 22 percent.
- **Model 3: Textiles Production:** The incremental FNPV is estimated at UZS 885.27 million (US\$ 84.31 thousand) with an FIRR of 21 percent and MIRR 15 percent.

28. The aggregate financial analysis results:

- **Model 1: Tomatoes greenhouse (assuming 20 ventures of this type):** The financial/incremental FNPV is estimated at UZS 2,221 billion (US\$ 211.6 million) over 20 years with an FIRR of 30 percent and MIRR of 18 percent.

³⁷ Source: <https://documents1.worldbank.org/curated/en/621721519940107694/pdf/2017-Shadow-Price-of-Carbon-Guidance-Note.pdf>

³⁸ Source: <https://www.imf.org/en/News/Articles/2021/04/23/pr21112-uzbekistan-imf-executive-board-concludes-2021-article-iv-consultation>

³⁹ Based on the OECD forecast: <https://data.oecd.org/price/inflation-forecast.htm>

⁴⁰ Note: No inflation predictions were developed and used in this analysis. Inflation remains hard to forecast, especially in times of pandemics.

⁴¹ Note: Only the estimated economic values will differ; the financial estimates remain the same regardless of the CO₂ valuation. The CO₂ valuation enters only the economic part of the EFA, in the form of shadow prices of Carbon (lower or upper Carbon valuation, respectively).



- **Model 2: Intensive orchard (assuming 30 ventures of this type):** The financial/incremental FNPV is estimated at UZS 5,429 billion (US\$ 517.12 million), with an FIRR of 44 percent and MIRR of 22 percent.
- **Model 3: Textiles Production (assuming 50 ventures of this type):** The financial/incremental FNPV is estimated at UZS 44.26 billion (US\$ 4.22 million) with an FIRR of 21 percent and MIRR 15 percent.

Table 2.

Individual Financial Results			
MODEL	Model 1 WP	Model 2 WP	Model 3 WP
Values in UZS OR %			
Financial			
FNPV	111,076,767,147	180,991,557,117	885,269,876
FIRR	30%	44%	21%
MIRR	18%	22%	15%
Values in USD OR %			
Financial			
FNPV	10,578,740	17,237,291	84,311
FIRR	30%	44%	21%
MIRR	18%	22%	15%

Table 3.

Aggregate Financial Results			
MODEL	Model 1 WP	Model 2 WP	Model 3 WP
Values in '000 UZS OR %			
Financial			
FNPV	2,221,535,343	5,429,746,714	44,263,494
FIRR	30%	44%	21%
MIRR	18%	22%	15%
Values in '000 USD OR %			
Financial			
FNPV	211,575	517,119	4,216
FIRR	30%	44%	21%
MIRR	18%	22%	15%

29. **The financial measures of profitability are positive for all the appraised indicative interventions.** The incremental economic measures of profitability are essential from the perspective of the entire economy. In contrast, estimates of the financial viability of the proposed interventions indicate whether the interventions are likely to be sustainable after the project ends. The financial analysis suggests that viability is expected, as financial profitability measures (FNPV, FIRR, and MIRR) are favorable for all proposed new ventures. The obtained FIRRs are also higher than the chosen discount rate of 12 percent, suggesting the likely financial profitability of these interventions. In the case of Model 3: Textiles' production (quilting), the financial results are relatively low (FIRR=21 percent) compared to the results obtained in the other two models. There are a couple of reasons for that. Firstly, these textiles' producing plants are assumed to be relatively small (Note: each plant is assumed to require a relatively low loan funding of US\$ 70 thousand).



Also, the results were estimated under the assumption of production at 70 percent of the total potential capacity.⁴² This potential capacity was taken from the assumptions included in the past similar loans delivered under the FVREDP. However, it is expected that once the textiles' plants get to know their market potential better, they will be able to scale up their production, resulting in higher FIRR (as investment and fixed costs will remain largely the same).

30. **The individual level economic analysis results (Tables 4 and 5).** The economic analysis results considered lower and upper bound Carbon pricing. Considering lower bound Carbon pricing, the following individual economic/incremental analysis estimates were obtained:

- **Model 1: Tomatoes greenhouse:** The economic/incremental ENPV is estimated at UZS 145.10 billion (US\$ 13.82 million) over 20 years with an ERR of 39 percent and EMIRR of 20 percent.
- **Model 2: Intensive orchard:** The economic/incremental ENPV is estimated at UZS 237.57 billion (US\$ 22.63 million) over 20 years, with an ERR of 77 percent and EMIRR of 28 percent.
- **Model 3: Textiles' production (assuming coal use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.281 billion (US\$ 217.30 thousand) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming natural gas use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.32 billion (US\$ 220.77 thousand) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming petrol use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.283 billion (US\$ 217.51 thousand) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.

31. Considering upper bound Carbon pricing, the individual economic/incremental analysis estimates are:

- **Model 1: Tomatoes greenhouse:** The economic/incremental ENPV is estimated at UZS 143.31 billion (US\$ 13.65 million) over 20 years with an ERR of 39 percent and EMIRR of 20 percent.
- **Model 2: Intensive orchard:** The economic/ incremental ENPV is estimated at UZS 237.99 billion (US\$ 22.67 million) over 20 years, with an ERR of 78 percent and EMIRR of 28 percent.
- **Model 3: Textiles' production (assuming coal use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.219 billion (US\$ 211.42 thousand) over 20 years, with an ERR of 36 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming natural gas use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.29 billion (US\$ 218.35 thousand) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming petrol use to produce electricity):** The economic/incremental ENPV is estimated at UZS 2.224 billion (US\$ 211.84 thousand) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.

⁴² Note: Capacity levels were established at 48 percent in year 1, 67 percent in year 2, 68 percent in year 3, 69 percent in year 4, and 70 percent in years 5-10.



Table 4.

Individual Economic Results Lower Carbon Bound					
MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in UZS OR %					
Economic					
ENPV	145,089,761,074	237,571,543,994	2,281,600,734	2,318,066,073	2,283,844,755
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in USD OR %					
Economic					
ENPV	13,818,072	22,625,861	217,295	220,768	217,509
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%

Table 5.

Individual Economic Results Upper Carbon Bound					
MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in UZS OR %					
Economic					
ENPV	143,307,289,151	237,988,169,962	2,219,885,070	2,292,653,741	2,224,363,142
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in USD OR %					
Economic					
ENPV	13,648,313	22,665,540	211,418	218,348	211,844
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%

32. The aggregate level economic/incremental analysis results (Tables 6 and 7) also considered lower and upper bound Carbon pricing. Considering lower bound Carbon and assuming 20, 30, and 50 ventures of each type, respectively, the following aggregate economic analysis estimates were obtained:

- **Model 1: Tomatoes greenhouse:** The economic/incremental aggregate ENPV is estimated at UZS 2,901 billion (US\$ 276.36 million) over 20 years with an ERR of 39 percent and EMIRR of 20 percent.
- **Model 2: Intensive orchard:** The economic/incremental aggregate ENPV is estimated at UZS 7,127 billion (US\$ 687.78 million) over 20 years, with an ERR of 77 percent and EMIRR of 28 percent.
- **Model 3: Textiles' production (assuming coal use to produce electricity):** The economic/incremental ENPV is estimated at UZS 114.08 billion (US\$ 10.87 million) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.



- **Model 3: Textiles' production (assuming natural gas use to produce electricity):** The economic/incremental ENPV is estimated at UZS 115.90 billion (US\$ 11.04 million) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming petrol use to produce electricity):** The economic/incremental ENPV is estimated at UZS 114.19 billion (US\$ 10.88 million) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.

33. Considering upper bound Carbon pricing, the aggregate economic analysis estimates are:

- **Model 1: Tomatoes greenhouse:** The economic/incremental aggregate ENPV is estimated at UZS 2,866 billion (US\$ 272.97million) over 20 years with an ERR of 39 percent and EMIRR of 20 percent.
- **Model 2: Intensive orchard:** The economic/ incremental aggregate ENPV is estimated at UZS 7,139 billion (US\$ 679.97 million) over 20 years, with an ERR of 78 percent and EMIRR of 28 percent.
- **Model 3: Textiles' production (assuming coal use to produce electricity):** The economic/incremental ENPV is estimated at UZS 110.99 billion (US\$ 10.571 million) over 20 years, with an ERR of 36 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming natural gas use to produce electricity):** The economic/incremental ENPV is estimated at UZS 114.63 billion (US\$ 10.92 million) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.
- **Model 3: Textiles' production (assuming petrol use to produce electricity):** The economic/incremental ENPV is estimated at UZS 111.22 billion (US\$ 10.59 million) over 20 years, with an ERR of 37 percent and EMIRR 19 percent.

Table 6.

Aggregate Economic Results Lower Carbon Bound					
MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in '000 UZS OR %					
Economic					
ENPV	2,901,795,221	7,127,146,320	114,080,037	115,903,304	114,192,238
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in '000 USD OR %					
Economic					
ENPV	276,361	678,776	10,865	11,038	10,875
ERR	39%	77%	37%	37%	37%
EMIRR	20%	28%	19%	19%	19%



Table 7.

Aggregate Economic Results Upper Carbon Bound					
MODEL	Model 1 WP	Model 2 WP	Model 3 WP (coal assumed)	Model 3 WP (nat. gas assumed)	Model 3 WP (petrol assumed)
Values in '000 UZS OR %					
Economic					
ENPV	2,866,145,783	7,139,645,099	110,994,253	114,632,687	111,218,157
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%
Values in '000 USD OR %					
Economic					
ENPV	272,966	679,966	10,571	10,917	10,592
ERR	39%	78%	36%	37%	37%
EMIRR	20%	28%	19%	19%	19%

34. **The sensitivity analysis was also pursued on several common and intervention-specific variables.** Several “what-if scenarios” were created to assess whether the financial and economic results would be changed by variations in important variables. The analysis was pursued using lower and upper bound carbon pricing, respectively.

- **Model 1: Tomatoes greenhouses:** The sensitivity analysis was pursued on total annual export sales revenue, total annual cost of electricity, natural gas annual cost, and on the economic discount rate. The variables were increased/decreased by 50 percent, respectively. The sensitivity analysis shows that obtained results are largely robust as changes in the cost of electricity and natural gas as well as increase in discount rate do not invalidate the profitability of the proposed intervention. However, a 40 percent decrease in total annual export revenue turns financial estimates into negative ones suggesting no financial profitability. The same situation happens with economic estimates but with a 50 percent decrease in annual export revenue. The sensitivity of the financial and economic estimates does not come as a surprise, and it was expected that changes in the export revenue which maintains 90 percent of the total revenue would affect the measures of financial profitability and economic sustainability of this venture.
- **Model 2: Intensive orchard:** The sensitivity analysis was pursued on the annual yield decrease, the total yearly cost of insecticides, the annual cost of electricity, and the economic discount rate. The variables were increased/decreased by 50 percent, respectively. The sensitivity analysis shows that obtained results are mainly robust as changes in each of them do not invalidate the proposed intervention's financial profitability and economic sustainability.
- **Model 3: Textiles Production:** The sensitivity analysis was pursued using the model where electricity is produced from coal. The sales price of quilted fabric and leatherette, the total annual cost of electricity, and the economic discount rate were sensitized. The variables were increased/decreased by 50 percent, respectively. The sensitivity analysis shows that obtained results are robust to increase in the cost of electricity



and increase in the economic discount rate as changes in these variables do not invalidate the proposed intervention's financial profitability and economic sustainability.

However, a 30 percent decrease in domestic sales price of quilted fabric and 30 percent decrease in domestic sales price of leatherette turns financial incremental results into negative areas. At the same time, a 50 percent decrease in the domestic sales price of quilted fabric turns economic incremental results into negative areas. The sensitivity to sales price was expected and is not uncommon in the case of such small plants. It is expected that this sensitivity to decrease in sales prices can be smoothed once these plants produce at a higher capacity than the one modelled here (capacity assumed equal to 70 percent).

35. **Carbon pricing and estimation of potential Carbon impacts.** The estimation of Carbon co-benefits remained an integral part of the analysis and proper pricing of Carbon was included in the economic part of this analysis to account for the potential environmental benefits/costs that might accrue through the proposed new ventures. The estimated volumes of Carbon were priced using the World Bank Guidance Note from November 12, 2017. Details regarding the suggested, and used Carbon pricing can be seen in Figure A. The following volumes of Carbon were estimated per each intervention:

- Model 1: 415 tCO₂e. per year, per facility (EMISSIONS)-based on EX-ACT software estimates,
- Model 2: -97 tCO₂e. per year, per facility (EMISSIONS reductions)-based on EX-ACT software estimates,
- Model 3: between 4.71-16.69 tCO₂e. tCO₂e. per year, per facility (EMISSIONS), depending on the source used for electricity production (either coal, nat. gas, or petroleum)- based on the U.S. Energy Information Administration (EIA) information.⁴³

36. Detailed discussion about the estimations of GHG emissions is presented in Annex 4.

Analytical Limitations

37. **The pursued analysis has some limitations.** The presented analysis was done with limitations associated with the lack of the ex-ante data that would allow the construction of the “Without Project (WOP)” scenarios. The methodologically superior method compares the WOP and WP scenarios that will result in the construction of the incremental cash and resource flows. Another limitation is associated with the lack of precise and known upfront potential interventions. The interventions that were appraised in this analysis come from the previous project. The situation might have changed, and the demand for loans might be different under the SERDP. Also, the estimated models are based on the data coming from the past project as it was the only available data at the time of the preparation of this analysis. There were no missions and no meetings with industry stakeholders and potential borrowers that would allow data collection.

Conclusions

38. **The analysis of the proposed Project's indicative interventions suggests that the REDP is likely to bring economic benefits to Uzbekistan.** Keeping in mind analytical limitations, the results confirm that the REDP is expected to deliver

⁴³ Source: <https://www.eia.gov/tools/faqs/faq.php?id=74&t=11>



economic benefits that will positively influence society and the country's economy. The main gains will manifest from switching to more modern technological solutions: aquaponic greenhouse, intensive orchard, and modernized textiles production. This switch is likely to bring higher production efficiency and increase the supply of tomatoes, fruits, and textiles. The Project is also expected to deliver more year-round employment options for the rural population.

39. **By building an enabling environment and providing the necessary funding, the Project will realize its development impact.** The proposed Project's development impact will result from the delivery of the required financing and advisory services destined for MSMEs investors having established business plans and means of putting their plan at work. The MSMEs are well-known engines for the country's economic growth and employment creation. They can provide measurable development impacts.

40. **The World Bank's value-added.** The Bank's value-added through the REDP comprises loan financing and staff's experience in implementing similar projects in Uzbekistan and elsewhere. The improvements in the business advisory services and the delivery of the necessary funding for the technologically superior ventures in horticulture, dairy, etc., would constitute direct WB's development contribution. It is likely that without the Bank's support, the provision of the necessary funding for the MSMEs would be significantly delayed, if not impossible. The Bank's contributions will also be realized through advisory help that will minimize capacity constraints within the Government of Uzbekistan.



ANNEX 4: Climate Co-Benefits and Greenhouse Gas Accounting

COUNTRY: Uzbekistan Second Rural Enterprise Development Project

Climate Co-Benefits

1. The project is expected to generate climate co-benefits through both adaptation and mitigation measures. Table 1 provides a description of these measures by component and sub-components.

Table 1: Climate Co-Benefits: Project Activities to Support Climate Adaptation and/or Mitigation

Sub-Components/ Activity	Financing Allocation (US\$ million)	Adaptation Measures	Mitigation Measures
Component 1: Rural Enterprise Development (IDA US\$ 20.0 million)			
1.1 Business Incubation and Mentorship	5.1	<ul style="list-style-type: none"> Disseminate information on the Climate Change adaptation and mitigation measures, organize awareness raising workshops. Strengthen project beneficiaries' knowledge on climate-smart agricultural practices – new varieties, greenhouses, crop diversification, integrated pest management, drip irrigation, post-harvest handling, storage, marketing, and processing 	
1.2 Partnership and Value Chain Development	0.7	<ul style="list-style-type: none"> Bring together value chain stakeholders/beneficiaries to explain the climate change consequences and promote partnerships 	
1.3 Climate Smart Technology Demonstration	5.5	<ul style="list-style-type: none"> Demonstrate climate smart technologies in small- and medium-sized agribusinesses and on farm enterprises in the project regions. Build capacity on innovative technologies that would have a significant impact in the long run on reducing GHG emissions, building resilience, and developing capacity for adaptation to climate change. 	
1.4 Women's Entrepreneurship Development	8.7	<ul style="list-style-type: none"> Provide matching grants to introduce climate change adaptation and mitigation technologies 	
Component 2: Access to Finance (IBRD US\$ 175.8 million)			



Sub-Components/ Activity	Financing Allocation (US\$ million)	Adaptation Measures	Mitigation Measures
2.1 Credit line for Farmers, agribusinesses, and rural enterprises	146.0	<ul style="list-style-type: none"> • Credit Line will support climate-resilient investments in the agricultural and rural sectors • Credit line portfolio will have at least 50% of portfolio classified as climate smart 	<ul style="list-style-type: none"> • Beneficiaries are eligible to borrow for the procurement of farm level ram pumps and solar-powered irrigation pumps and drip irrigation systems
2.2 Partial Credit Guarantees under the State Fund for Support of Entrepreneurship	27.7	<ul style="list-style-type: none"> • PCG will provide financial support to the beneficiaries who are affected by the climate change 	<ul style="list-style-type: none"> • Beneficiaries are eligible to borrow for the procurement of farm level ram pumps and solar-powered irrigation pumps and drip irrigation systems
2.3 Technical Assistance to Participating Financial Institutions.	2.1	<ul style="list-style-type: none"> • Build capacity of participating commercial banks' lending specialists on the climate change and introduce innovative financing instruments 	

GHG Accounting

2. To estimate the potential impact of project investments on GHG emissions and carbon sequestration, the analysis primarily used the ex-ante Carbon-balance tool (EX-ACT), developed by the Food and Agriculture Organization of the United Nations (FAO).⁴⁴ The projects' GHG analysis was undertaken using three indicative models. For *Model 1: Establishment of modern aquaponic greenhouses* and *Model 2: Establishment of modern orchards*, the EX-ACT software was employed; however, for *Model 3: Establishment of textiles' production (quilting)*, the EX-ACT software could not be used as it is not suitable for estimations of the industry's GHG emissions. Therefore, in Model 3, the estimated GHG emissions from the electricity usage were monetized instead.

3. **Electricity usage versus GHG emissions.** The ex-ante quantification of GHG emissions from the proposed investments in textiles production (quilting) was infeasible when using EX-ACT as the software can be used only in the case of interventions concerning agriculture or forestry. Therefore, to estimate the potential impact of textiles investments on GHG emissions and carbon sequestration, the total annual usage of electricity necessary for the operation of textiles facilities was used instead. The conversion of electricity usage (kWh/year) into GHG emissions was based on the information obtained from the Independent Statistics and Analysis of the US Energy Information Administration.⁴⁵

4. **Analytical timeframe.** REDP project's loan will be disbursed over five years; however, the CBA and GHG analysis are pursued over 20 years. The EFA used a 20-year timeframe to estimate proposed investments' financial profitability and economic sustainability and to accommodate valuation and inclusion of carbon co-benefit.

⁴⁴ EX-ACT assesses a project's net carbon balance, defined as the net balance of CO2 equivalent GHG emitted or sequestered because of project implementation compared to a without-project scenario, which is assumed to be adopting conventional technologies.

⁴⁵ Based on: <https://www.eia.gov/tools/faqs/faq.php?id=74&t=11>



5. **Model 1 and 2 GHG estimations.** The EX-ACT analysis in the case of Models 1 and 2 was run in EX-ACT software over a standard total of 20 years. The following assumptions were used in EX-ACT for that purpose:

- ✓ Continent: Asia (Continental),
- ✓ Climate: warm temperate dry,
- ✓ Soils: High Activity Clay Soils (most dominant in Uzbekistan),
- ✓ Implementation: 1 year,
- ✓ Capitalization: 19 years,
- ✓ For Model 2, the agroforestry component: WOP scenario: 251 ha of annual cropland with residue burning was assumed; 251 ha of Orchards was chosen for the WP scenario. [Note: EX-ACT does not directly provide an orchard agroforestry system. Hence Agroforestry system (default) was chosen but refined with IPCC values in the Tier 2 section of EX-ACT],
- ✓ For all inputs in Model 1 and 2: the WOP scenario is 0 inputs,⁴⁶
- ✓ As per Tables 2 and 3 below, multiple inputs were assumed in the WP scenario, respectively. Please refer to these two tables for details.

6. **Model 3 GHG.** The GHG emissions analysis in the case of Model 3 was also modeled over 20 years and established via multiplication of the total potential GHG emissions associated with annual electricity usage when assuming three different potential sources of electricity production, respectively: coal use, natural gas use, and petroleum use.⁴⁷

7. **Project scenarios and assumptions.** As described in the EFA, the project assessment activities assumed three potential interventions: Model 1, 2, and 3. These interventions were used to pursue EFA and GHG accounting. Each of the assessed interventions will support a different set of enterprise investments, such as establishing a modern, aquaponic greenhouse for tomatoes production, establishing a modern fruit orchard, and investments to support modern textiles production (for more details, please see EFA Annex 3). All these proposed investments will be demand-based. At the time of this analysis, it is unknown if these specific investments will be implemented, where exactly they will be implemented and in what aggregate numbers these investments will be implemented. The assessed investments are indicative only. All valuations and assumptions used in this analysis are based on the example of three previous loans delivered under the FVREDP.

8. **The GHG Analysis.** The GHG analysis was carried out individually for each of the three indicative interventions and then aggregated to outline possible results based on the total assumed number of each type of investment. The specific assumptions for the individual interventions are as follows:

⁴⁶ Note: The investments funded by the REDP will be demand-based. The scenarios were constructed based on loans given under the previous project FVREDP. The potential interventions as described in this EFA and GHG are INDICATIVE as it is not possible to know upfront in which specific location these interventions will be undertaken.

⁴⁷ The potential emissions were established separately for each type of source that could potentially be used in electricity production to show how the results might differ depending on the source used. Electricity is expected to be the primary source of potential GHG emissions in the case of Model 3. In this model, the proposed investment aims to establish modern textiles production using electric and computerized textiles/quilting sewing machines. Please note, coal use is considered the most conservative approach, hence the safest to assume if only one value is required.



- **Establishment of modern aquaponics greenhouse for tomatoes production (Model 1).** It is assumed that there is currently no greenhouse in place and that the project will support the construction of a modern greenhouse suitable to produce tomatoes. The individual aquaponic greenhouse will be established on 13 ha producing tomatoes exclusively. Total individual estimated annual emissions associated with the operation of such greenhouse are at 415 tCO₂eq per year⁴⁸, per individual greenhouse of this type. This will add up to 8,715 tCO₂eq of carbon emissions per 20 years, per individual greenhouse of this type. Assuming 20 greenhouses of this type in aggregate, the aggregate volume of carbon over 20 years would be 174,300 tCO₂eq of carbon emissions. These volumes were priced accordingly for individual and aggregate results using proper carbon shadow prices⁴⁹ and included in the economic part of the analysis (as economic costs). These values are also shown in Tables 4 (individual results) and 5 (aggregate results) below. Table 2 lists additional assumptions used in setting up the EX-ACT for Model 1. Please also refer to the accompanying EX-ACT files for more comments, specific details, and notes with additional comments within EX-ACT files.

Table 2. Model 1: EX-ACT Additional Assumptions.

Item	Volume used in EX-ACT (WP scenario)	Volume used in the EX-ACT (WOP scenario)
Chemicals (e.g., fertilizers, etc.)		
Calcium Acid	2.7 t/ha	No inputs usage was assumed. Establishment of indicative new ventures was assumed. No inputs were used in the WOP scenario as there was no WOP scenario established due to the lack of information. This is demand-based project, and all proposed interventions are indicative.
Iron Sulphate	0.05 t/ha	
Calcium Nitrate	1.42 t/ha	
Magnesium Sulphate	1.35 t/ha	
Starch Sulphate	0.9 t/ha	
Phosphoric Ammonium	0.2 t/ha	
Potassium Phosphate	0.3 t/ha	
Manganese Sulphate	0.06 t/ha	
Zinc Sulphate	0.3 t/ha	
Copper Sulphate	0.05 t/ha	
Boric Acid	0.2 t/ha	
Sodium Molibdate	0.5 t/ha	
Other inputs		
Electricity	624,000 kWh/13 ha	Null assumed (the explanations above ref: fertilizers apply here, too).

- **Establishment of a modern fruit orchard (Model 2).** It is assumed that there is currently no orchard in place. The project will support the establishment of a modern orchard (251.1 ha) suitable to produce a variety of fruits: apples, plums, sour cherries, cherries, pears, peaches. Total emissions associated with establishing such

⁴⁸ Note: this volume of emissions was accounted for in the economic part of the analysis in each of the 20 years of analysis. Equal distribution of carbon emissions per year was priced and accounted for in EFA.

⁴⁹ Based on World Bank (2017), "Guidance note on shadow price of carbon in economic analysis." Washington, DC. Available at <http://documents.worldbank.org/curated/en/621721519940107694/Guidance-note-on-shadow-price-of-carbon-in-economic-analysis>.



an orchard are estimated at 97 tCO₂eq per year⁵⁰ of carbon sequestration per individual orchard of this type. This will add up to 2,037 tCO₂eq of carbon sequestration per 20 years, per individual orchard of this type. Assuming 30 orchards of this type in aggregate, the aggregate volume of carbon over 20 years would be 61,110 tCO₂eq of carbon sequestration. These volumes were priced accordingly for individual and aggregate results using proper carbon shadow prices⁵¹ and included in the economic part of the analysis (as economic co-benefits). These values are also shown in Tables 4 (individual results) and 5 (aggregate results) below. Table 3 lists additional assumptions used in setting up the EX-ACT for Model 2. Please also refer to the accompanying EX-ACT files for more comments, specific details, and notes with additional comments within EX-ACT files.

Table 3. Model 2: EX-ACT Additional Assumptions.

Item	Volume used in EX-ACT (WP scenario)	Volume used in the EX-ACT (WOP scenario)
Chemicals (e.g., fertilizers, etc.)		
Nitrogen	150 kg/ha	No inputs usage was assumed. Establishment of indicative new ventures was assumed. No inputs were used in the WOP scenario as there was no WOP scenario established due to the lack of information. This is demand-based project, and all proposed interventions are indicative.
Phosphorus	150 kg /ha	
Potassium	150 kg /ha	
Insecticides/herbicides	15 l/ha	
Other inputs		
Electricity	391,100 kWh	Null assumed (the explanations above ref: fertilizers apply here, too).

- **Establishment of a modern textiles production (Model 3).**⁵² It is assumed that currently, there are no textile-producing facilities in place. The annual emissions associated with the operation of such facilities are estimated at:
 - ✓ Assuming that electricity is produced from coal. Operation years: Year 1: 11.44 tCO₂eq, Year 2: 15.97 tCO₂eq, Year 3: 16.21 tCO₂eq, Year 4: 16.45 tCO₂eq, Year 5-20: 16.69 tCO₂eq per individual plant. This will sum to 327.08 tCO₂eq over twenty years per individual facility of this type. In aggregate, the establishment of 50 textiles producing facilities was assumed: hence potentially 16,353.80 tCO₂eq over twenty years.
 - ✓ Assuming that electricity is produced from natural gas. Operation years: Year 1: 4.71 tCO₂eq, Year 2: 6.58 tCO₂eq, Year 3: 6.68 tCO₂eq, Year 4: 6.77 tCO₂eq, Year 5-20: 6.87 tCO₂eq per individual plant. This will sum to 134.68 tCO₂eq over twenty years per individual facility of this type. In aggregate, the

⁵⁰ Note: this volume of emission savings was accounted for in the economic part of the analysis in each of the 20 years of analysis. Equal distribution of carbon sequestration per year was used and accounted for in EFA.

⁵¹ Based on World Bank (2017), "Guidance note on shadow price of carbon in economic analysis." Washington, DC. Available at <http://documents.worldbank.org/curated/en/621721519940107694/Guidance-note-on-shadow-price-of-carbon-in-economic-analysis>.

⁵² In aggregate, the establishment of 50 textiles producing facilities of this type was assumed (either using electricity coming from coal or natural gas, or petroleum). Furthermore, it was assumed that in year 1, there would be no GHG emissions as the facility is being established and the production starts in year 2. In year 1 of production (when production happens), the total capacity was established at 48%, in year two at 67%, in year three at 68%, in year four at 69%, and in years 5-20 at 70%. The GHG results account for these capacity assumptions.



establishment of 50 textiles producing facilities was assumed: hence potentially 6,733.92 tCO₂eq over twenty years.

- ✓ Assuming that electricity is produced from petroleum. Operation years: Year 1: 11.03 tCO₂eq, Year 2: 15.39 tCO₂eq, Year 3: 15.62 tCO₂eq, Year 4: 15.85 tCO₂eq, Year 5-20: 16.08 tCO₂eq per individual plant. This will sum to 315.24 tCO₂eq over twenty years per individual greenhouse of this type. In aggregate, the establishment of 50 textiles producing facilities was assumed: hence potentially 15,761.81 tCO₂eq over twenty years.

9. **Valuation of GHG emissions.**⁵³ Tables 4 and 5 below show the valuation (in US\$) of annual GHG emissions and a total valuation of GHG emissions over twenty years for each investment type, and per assumed a total number of investments of each type over the project lifetime. Following World Bank guidance, two carbon prices are considered in the analysis (low and high estimates).

⁵³ Based on World Bank (2017), "Guidance note on shadow price of carbon in economic analysis." Washington, DC. Available at <http://documents.worldbank.org/curated/en/621721519940107694/Guidance-note-on-shadow-price-of-carbon-in-economic-analysis>.



Table 4. Individual Model Results

Individual GHG Emissions Valuation, Per Investment in US\$		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Shadow price of Carbon (US\$/ton)	low	42	43	44	45	46	47	48	49	50	51	52	53	55	56	57	58	60	61	63	64	65
	high	84	86	87	89	91	94	96	98	100	102	105	107	109	112	114	117	120	122	125	128	131
Model 1: Tomatoes greenhouse	low	-17,430	-17,845	-18,260	-18,675	-19,090	-19,505	-19,920	-20,335	-20,750	-21,165	-21,580	-21,995	-22,825	-23,240	-23,655	-24,070	-24,900	-25,315	-26,145	-26,560	-26,975
	high	-34,860	-35,690	-36,105	-36,935	-37,765	-39,010	-39,840	-40,670	-41,500	-42,330	-43,575	-44,405	-45,235	-46,480	-47,310	-48,555	-49,800	-50,630	-51,875	-53,120	-54,365
Model 2: Intensive orchard	low	4,074	4,171	4,268	4,365	4,462	4,559	4,656	4,753	4,850	4,947	5,044	5,141	5,335	5,432	5,529	5,626	5,820	5,917	6,111	6,208	6,305
	high	8,148	8,342	8,439	8,633	8,827	9,118	9,312	9,506	9,700	9,894	10,185	10,379	10,573	10,864	11,058	11,349	11,640	11,834	12,125	12,416	12,707
Model 3: Textile production (assuming Coal use for electricity production)	low	0	-492	-703	-729	-757	-784	-801	-818	-834	-851	-868	-884	-918	-935	-951	-968	-1,001	-1,018	-1,051	-1,068	-1,085
	high	0	-984	-1,390	-1,443	-1,497	-1,569	-1,602	-1,635	-1,669	-1,702	-1,752	-1,786	-1,819	-1,869	-1,902	-1,952	-2,003	-2,036	-2,086	-2,136	-2,186
Model 3: Textile production (assuming natural gas use for electricity production)	low	0	-203	-289	-300	-312	-323	-330	-337	-344	-350	-357	-364	-378	-385	-392	-399	-412	-419	-433	-440	-447
	high	0	-405	-572	-594	-616	-646	-660	-673	-687	-701	-721	-735	-749	-770	-783	-804	-825	-838	-859	-880	-900
Model 3: Textile production (assuming petroleum use for electricity production)	low	0	-474	-677	-703	-729	-756	-772	-788	-804	-820	-836	-852	-885	-901	-917	-933	-965	-981	-1,013	-1,029	-1,045
	high	0	-948	-1,339	-1,391	-1,443	-1,512	-1,544	-1,576	-1,608	-1,641	-1,689	-1,721	-1,753	-1,801	-1,834	-1,882	-1,930	-1,962	-2,010	-2,059	-2,107
TOTAL 1	low	-13,356	-14,166	-14,695	-15,039	-15,385	-15,730	-16,065	-16,400	-16,734	-17,069	-17,404	-17,738	-18,408	-18,743	-19,077	-19,412	-20,081	-20,416	-21,085	-21,420	-21,755
	high	-26,712	-28,332	-29,056	-29,745	-30,435	-31,461	-32,130	-32,799	-33,469	-34,138	-35,142	-35,812	-36,481	-37,485	-38,154	-39,158	-40,163	-40,832	-41,836	-42,840	-43,844
TOTAL 2	low	-13,356	-13,877	-14,281	-14,610	-14,940	-15,269	-15,594	-15,919	-16,244	-16,568	-16,893	-17,218	-17,868	-18,193	-18,518	-18,843	-19,492	-19,817	-20,467	-20,792	-21,117
	high	-26,712	-27,753	-28,238	-28,896	-29,554	-30,538	-31,188	-31,837	-32,487	-33,137	-34,111	-34,761	-35,411	-36,386	-37,035	-38,010	-38,985	-39,634	-40,609	-41,584	-42,558
TOTAL 3	low	-13,356	-14,148	-14,669	-15,013	-15,357	-15,702	-16,036	-16,370	-16,704	-17,038	-17,372	-17,706	-18,375	-18,709	-19,043	-19,377	-20,045	-20,379	-21,047	-21,381	-21,715
	high	-13,356	-28,296	-29,005	-29,693	-30,381	-31,404	-32,072	-32,740	-33,408	-34,077	-35,079	-35,747	-36,415	-37,417	-38,086	-39,088	-40,090	-40,758	-41,760	-42,763	-43,765

Note: Negative values mean GHG emissions, positive values mean GHG emissions savings. **"Total 1" sums Model 1, 2 and Model 3 (carbon), ***"Total 2" sums Model 1, 2 and Model 3 (natural gas), *** "Total 3" sums Model 1, 2 and Model 3 (petroleum).



Table 5. Aggregate Model Results

Aggregate GHG Emissions Valuation, Per Investment in US\$		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Shadow price of Carbon (US\$/ton)	low	42	43	44	45	46	47	48	49	50	51	52	53	55	56	57	58	60	61	63	64	65
	high	84	86	87	89	91	94	96	98	100	102	105	107	109	112	114	117	120	122	125	128	131
Model 1: Tomatoes greenhouse	low	348,600	356,900	365,200	373,500	381,800	390,100	398,400	406,700	415,000	423,300	431,600	439,900	456,500	464,800	473,100	481,400	498,000	-506,300	-522,900	-531,200	-539,500
	high	697,200	713,800	722,100	738,700	755,300	780,200	796,800	813,400	830,000	846,600	871,500	888,100	904,700	929,600	946,200	971,100	996,000	1,012,600	1,037,500	1,062,400	1,087,300
Model 2: Intensive orchard	low	122,220	125,130	128,040	130,950	133,860	136,770	139,680	142,590	145,500	148,410	151,320	154,230	160,050	162,960	165,870	168,780	174,600	177,510	183,330	186,240	189,150
	high	244,440	250,260	253,170	258,990	264,810	273,540	279,360	285,180	291,000	296,820	305,550	311,370	317,190	325,920	331,740	340,470	349,200	355,020	363,750	372,480	381,210
Model 3: Textile production (assuming Coal use for electricity production)	low	0	-24,602	-35,139	-36,474	-37,833	-39,216	-40,050	-40,884	-41,719	-42,553	-43,388	-44,222	-45,891	-46,725	-47,560	-48,394	-50,063	-50,897	-52,566	-53,400	-54,235
	high	0	-49,204	-69,480	-72,138	-74,844	-78,431	-80,100	-81,769	-83,438	-85,107	-87,610	-89,278	-90,947	-93,450	-95,119	-97,622	100,125	-101,794	-104,297	-106,800	-109,303
Model 3: Textile production (assuming natural gas use for electricity production)	low	0	-10,130	-14,469	-15,019	-15,578	-16,148	-16,491	-16,835	-17,178	-17,522	-17,865	-18,209	-18,896	-19,240	-19,583	-19,927	-20,614	-20,958	-21,645	-21,988	-22,332
	high	0	-20,261	-28,609	-29,704	-30,818	-32,295	-32,982	-33,670	-34,357	-35,044	-36,075	-36,762	-37,449	-38,480	-39,167	-40,197	-41,228	-41,915	-42,946	-43,977	-45,007
Model 3: Textile production (assuming petroleum use for electricity production)	low	0	-23,712	-33,867	-35,154	-36,464	-37,796	-38,600	-39,405	-40,209	-41,013	-41,817	-42,621	-44,230	-45,034	-45,838	-46,642	-48,250	-49,055	-50,663	-51,467	-52,271
	high	0	-47,423	-66,965	-69,527	-72,134	-75,592	-77,201	-78,809	-80,417	-82,026	-84,438	-86,047	-87,655	-90,067	-91,676	-94,088	-96,501	-98,109	-100,522	-102,934	-105,347
TOTAL 1	low	226,380	256,372	272,299	279,024	285,773	292,546	298,770	304,994	311,219	317,443	323,668	329,892	342,341	348,565	354,790	361,014	373,463	-379,687	-392,136	-398,360	-404,585
	high	452,760	512,744	538,410	551,848	565,334	585,091	597,540	609,989	622,438	634,887	653,560	666,008	678,457	697,130	709,579	728,252	746,925	-759,374	-778,047	-796,720	-815,393
TOTAL 2	low	226,380	241,900	251,629	257,569	263,518	269,478	275,211	280,945	286,678	292,412	298,145	303,879	315,346	321,080	326,813	332,547	344,014	-349,748	-361,215	-366,948	-372,682
	high	452,760	483,801	497,539	509,414	521,308	538,955	550,422	561,890	573,357	584,824	602,025	613,492	624,959	642,160	653,627	670,827	688,028	-699,495	-716,696	-733,897	-751,097
TOTAL 3	low	226,380	255,482	271,027	277,704	284,404	291,126	297,320	303,515	309,709	315,903	322,097	328,291	340,680	346,874	353,068	359,262	371,650	-377,845	-390,233	-396,427	-402,621
	high	452,760	510,963	535,895	549,237	562,624	582,252	594,641	607,029	619,417	631,806	650,388	662,777	675,165	693,747	706,136	724,718	743,301	-755,689	-774,272	-792,854	-811,437

Note: Negative values mean GHG emissions, positive values mean GHG emissions savings. *"Total 1" sums Model 1, 2 and Model 3 (carbon), **"Total 2" sums Model 1, 2 and Model 3 (natural gas), *** "Total 3" sums Model 1, 2 and Model 3 (petroleum).



ANNEX 5: Financial Sector Annex

COUNTRY: Uzbekistan Second Rural Enterprise Development Project

A. Overview of the Financial Sector

- Despite recent progress, the Uzbek financial sector has yet to catch up with peers' and low savings mobilization continues to be a significant challenge.** Between 2013 and 2020, domestic credit to private sector to GDP increased from 10 to 37 percent, with the highest growth rates observed in 2017-2018. Yet, this level remains below regional peers' in ECA (56 percent) and lower middle-income countries' (42 percent). The rapid expansion in credit supply has been fueled by wholesale funding rather than through depositors, especially savings mobilized from the population. During the same period, bank deposits to GDP has increased from 13 to 20 percent, with a decrease in 2018-2019. In addition, banks' deposit bases are concentrated with a strong presence of the state. Past issues involving cash shortages, restriction on currency conversion, and disruptions in the payments systems have contributed to a loss of trust in the sector.
- Uzbekistan's financial sector is bank-dominated, primarily state-owned, and highly concentrated.** Commercial banks comprise more than 95 percent of total financial sector assets. There are virtually no financing alternatives to banks, as capital markets, non-bank financial organizations (microcredit organizations and pawnshops) and leasing companies remain fairly undeveloped.⁵⁴ The banking sector includes 32 commercial banks, including 13 state-owned banks (SOBs) that hold around 85 percent of total sector assets and 88 percent of total credit as of end-December 2020. The banking sector is highly concentrated with the three largest banks accounting for 48 percent of total assets and the six largest SOBs 72 percent.⁵⁵
- The dominance of SOBs and preferential lending have historically constrained financial intermediation.** These banks have traditionally lent at below-market rates to priority sectors, including low-income housing, entrepreneurs, agriculture, among others. In contrast, private banks, which are small, largely lend to the private industry, trade and individuals on commercial terms.⁵⁶ The prevalence of preferential lending has hampered banks' incentives to improve their capacity to assess borrowers' creditworthiness, as banks largely focused on compliance with eligibility criteria of each government program. Authorities have taken steps to address the issue and reduce the role of the state in the sector, including the transfer of loans funded by the Uzbekistan Fund for Reconstruction and Development (UFRD) out of banks (loans to SOEs and budget organizations, which used to represent half of loans, are now less than 30 percent), strengthening governance and management of SOBs, attracting investors to some SOBs, and developing a plan for divesting and privatizing seven banks by end-2025.

⁵⁴ There were 63 microcredit organizations and 64 pawnshops, which combined accounted for less 0.3 percent of total loans. They are regulated by the Central Bank of Uzbekistan. The leasing sector is mostly unregulated, accounting for about 2 percent of total loans. Many leasing companies are subsidiaries of commercial banks.

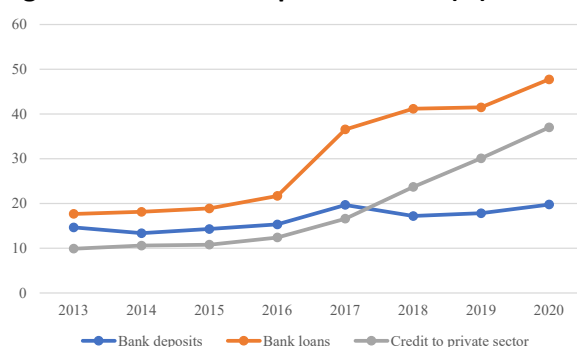
⁵⁵ While the UFRD is the largest SOB shareholder, the formal responsibility of exerting shareholder rights and representing the government was transferred to the MOF in 2020.

⁵⁶ The average equity of private banks was US\$ 47 million. The equity bases ranged from only US\$ 10 million to larger ones of between US\$ 60-130 million. Out of 19 private banks, three have been licensed in the past two years.



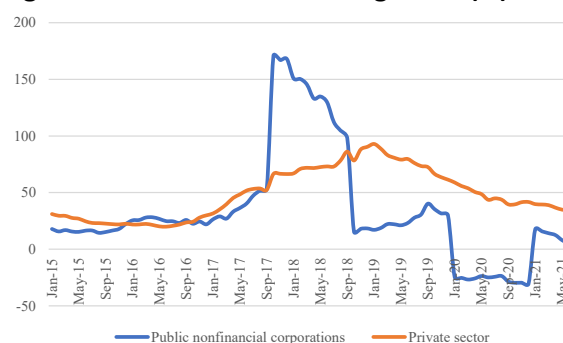
4. **The financial sector has observed a credit boom since 2017 funded by quasi-fiscal expenditures and more recently by an increase in external borrowing.** Prior to the transfer of UFRD-funded loans, the overall credit growth rates surpassed 100 percent in 2018-2019 due to increased lending to private companies, individuals and SOEs. Growth rates have moderated in the past two years but remain high despite the effects of the COVID-19 pandemic. Credit growth has been primarily driven by funding from the state and external borrowings to SOBs. While SOBs mostly rely on external borrowings (35 percent of liabilities) as well as the state (30 percent), private banks funded their credit portfolios through retail depositors (60 percent of liabilities) and external borrowings (15 percent). In 2020, a significant portion of bank funding has started to come from credit lines from foreign banks and IFIs, which accounted for about 60 percent of the total funding increase. In addition, SOBs have raised funds through Eurobond issuances.⁵⁷

Figure 1: Credit and deposits to GDP (%)



Source: IMF Financial Access Survey (2020).

Figure 2: Annual nominal loan growth (%)



Source: CBU Monetary Statistics.

B. Financial Sector Vulnerabilities

5. **The banking sector has showed resilience after the COVID-19 outbreak, but substantial risks stem from rapid credit growth, high levels of concentration and foreign currency risks.** The sector's financial soundness indicators have been worsening, although the sector remains adequately capitalized with a ratio of 18 percent. In 2020, non-performing loans (NPLs) had seen only a modest increase, supported by the temporary loan repayment deferrals introduced in response to the crisis, but they have been steadily increasing and credit risks are elevated. NPLs might be underestimated due to inadequate accounting standards. Aggressive lending under poor credit underwriting standard and weak governance arrangements might translate into credit losses in the future. The rapid growth rates have depleted the sector's liquidity and several banks, especially SOBs, have kept modest cushions.⁵⁸ The sector's loan-to-deposit ratio currently stood at 238 percent (299 and 100 percent for SOBs and private banks, respectively). In addition, dollarization levels remain high (roughly 50 percent of assets, 40 percent of deposits, 48 percent of non-deposit funding).

⁵⁷ Uzpromstroy Bank attracted US\$300 million in November 2019, followed by NBU (US\$ 300 million in October 2020) and Ipoteka Bank (in process).

⁵⁸ In response to the COVID-19 crisis, the CBU has introduced measures to provide liquidity to the financial sector. This includes a UZS 2 trillion (equivalent of US\$ 200 million) special mechanism for providing liquidity to commercial banks for up to 3 years and reduced mandatory reserves for commercial banks (valued at UZS 2.6 trillion or US\$ 260 million).



Table 1: Financial prudential indicators for deposit-taking institutions

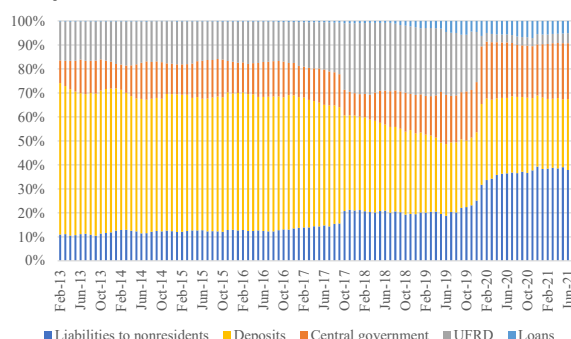
	2015	2016	2017	2018	2019	2020	1Q 2021
Capital adequacy ratio	14.72	14.73	18.77	15.64	23.52	18.36	18.43
Tier 1 capital ratio	12.55	12.50	16.55	14.29	19.57	15.19	16.42
NPLs to total loans	1.46	0.74	1.20	1.28	1.50	2.06	3.54
Return on assets	2.00	2.00	1.87	2.05	2.23	2.21	1.98
Return on equity	17.47	17.95	17.13	16.19	16.73	10.29	9.90
Interest margin to gross income	39.90	39.45	32.55	48.42	50.71	54.35	41.75
Non-interest expenses to gross income	65.87	64.82	59.30	54.42	49.54	45.11	33.42
Liquid assets to total assets	23.68	25.36	23.63	13.64	13.89	15.37	15.04
Liquid assets to short term liabilities	43.56	48.36	55.65	41.17	40.32	39.86	40.13
Net open position in FX to capital	11.25	11.91	13.54	2.07	11.60	4.04	3.73

Source: IMF – Financial Soundness Indicators Database.

6. **Despite the outbreak of the COVID-19 global pandemic, credit growth has remained high in 2020.** In the months following the outbreak, credit origination decreased by 40 percent, only resuming positive growth rates on the fourth quarter of 2020. Despite the impact, credit to the private sector has still increased by 31 percent in 2020. The main economic sectors financed by banks in 2020 were industry (37 percent of bank loans), retail loans (20 percent), transport & communication (10 percent) and agriculture (10 percent). The highest annual growth rates in 2020 were observed in agriculture (63 percent), trade and catering (38 percent), retail (37 percent), industry (35 percent). Increased reliance on external borrowing enabled banks to increase the supply of long-term financing, with roughly 40 percent of loans being channeled to the purchase of fixed assets, compared to 16 percent channeled to working capital.

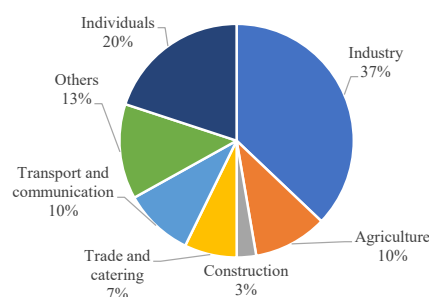


Figure 3: Commercial banks – funding composition



Source: Central Bank of Uzbekistan (CBU) ODC Survey.

Figure 4: Outstanding bank loans in 2020



Source: CBU Statistical Bulletin.

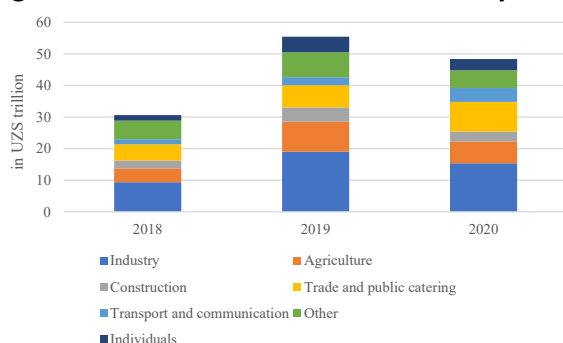
7. **The CBU is taking the needed steps to strengthen its regulatory and supervisory frameworks.** Several regulations have been developed in accordance with the international standards, including on bank licensing, corporate governance, large exposures and related party framework, prudential reporting, and liquidity. Regulations on risk management, LCR/NSFR, internal audit, external audit, and bank disclosure framework are in preparation. With the support of the World Bank and the ADB, further actions are being taken to gradually implement a risk-based supervisory approach that includes developing a sound and robust early-supervisory-intervention framework.

C. Financing of Small Businesses

8. **The supply of bank credit to small businesses has increased in the past two years.** According to the CBU, the share of loans extended to small businesses (origination) has increased from 30 to 38 percent between 2018 and 2020 (although in 2020 the new loans extended to this segment actually decreased by 13 percent). In 2020, loans to small businesses were distributed to the industry (32 percent), trade and public catering (19 percent), and agriculture (14 percent). In value terms, the distribution of these small business loans across regions was concentrated in Tashkent region (33 percent). The distribution to other regions was balanced, with Samarkand, Ferghana and Andijan receiving slightly more loans, and the Republic of Karakalpakstan and Navoi receiving the lowest share of loans. In terms of number of loans, the regions with the highest share of loans were Namagan (16 percent of number of loans), Samarkand, Ferghana and Tashkent region (8 percent). The average size of loans ranged from US\$2,000-6,000 to US\$20,000-50,000 depending on the region, except for Tashkent which observed large loans on average. A substantial portion of these loans was financed through government programs to support microcredits, family and female entrepreneurship and handicrafts. Foreign credit lines funded only four percent of loans given in 2020, but this source of funding has increased significantly last year.

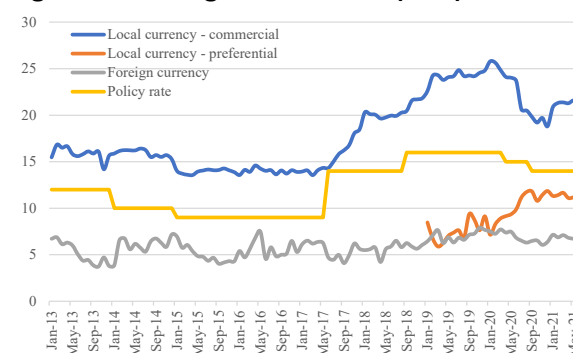


Figure 5: Loans extended to MSMEs each year



Source: CBU Statistical Bulletin.

Figure 6: Lending interest rates (in %)



Source: CBU Statistical Bulletin.

9. **Despite recent progress, MSME still face significant access to finance constraints.** According to the 2019 Enterprise Survey, only 19 percent of small firms had a bank loan, compared to 29 and 29 percent of medium and large firms, respectively. While the survey does not cover primary agriculture, evidence suggests certain types of agribusinesses, such as garments and textiles, might face stricter requirements than other manufacturing sectors. High collateral requirements and increasing financing costs impose key challenges for firms. Despite improvements over recent years, collateral requirements remain high especially for small businesses (172 and 160 percent of loan amounts SMEs respectively, compared to 127 percent for large firms). Among other challenges are: (i) low financial literacy levels, lack of reliable financial statements and limited managerial capacity to prepare loan application; (ii) insufficient levels of the type of collateral acceptable to financial institutions, especially among new enterprises; (iii) limited availability of financial products and lending methodologies, which suit the specific needs of MSMEs; and (iv) limited financial market infrastructure (such as moveable collateral registration).

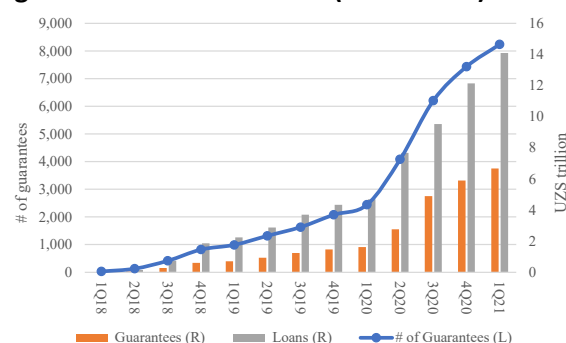
10. **Established in 2017, the State Fund for Support of Entrepreneurship Activities aims at providing financial assistance to private MSMEs in Uzbekistan.** Under the Agency for the Work of Mahallabay and Entrepreneurship Development of the Ministry of Economic Development and Poverty Reduction (MEDPR), the State Fund supports firms mainly through interest rate subsidies and partial credit guarantees (PCGs), and it is planning to provide support training (reimbursement of tuition fees) and microfinance for youth and women entrepreneurs through non-profit NGOs. The PCG is a key business line for the fund as it directly addresses collateral constraints. The fund provides PCGs to participating financial institutions (PFIs) of up to 50 percent of loan amount, not exceeding UZ\$ 8 billion (~US\$ 750,000) with a one-time one percent fee paid upfront by the borrower.⁵⁹ The fund operates on a *first-out basis*, as the guarantee amount decreases along with loan repayments.

⁵⁹ On March 19, 2020, the President announced an allocation of UZ\$ 500 billion to the State Fund (~US\$ 52.5 million) to scale up its operations in response to the COVID-19 outbreak. Following this announcement, additional details were provided on April 3, 2020: (i) increase of the interest rate compensation to 12 from 8 percent on loans with interest rates up to 28 percent (previously 24 percent); (ii) lift of the provision that restricted a borrower from accessing the compensation and guarantee at the same time; (iii) increase of guarantee coverage to 70 from 50 percent; (iv) increase of maximum loan amount allowed for the guarantee scheme to UZ\$ 10 billion (from UZ\$ 8 billion).



11. **The provision of PCGs has expanded but the scheme remains untested.** Since its inception until March 2021, the scheme has issued more than 8,000 PCGs in the amount of UZS 6.4 trillion, supporting UZS 16.5 trillion in loans (equivalent to 12 percent of loans extended to MSMEs between 2018-2020). Roughly 60 percent of PCGs were issued in 2020 alone, when borrowers were allowed to use both interest rate subsidies and PCGs at the same time due to the COVID-19 pandemic. Despite this progress, the utilization of the scheme has been fairly low as virtually there haven't been any claims made by PFIs (there have been only four cases of NPLs). The main reasons include: (i) historically low NPL ratios pre-COVID crisis; (ii) low coverage provided by the scheme as it is not *pari passu* and relatively efficient court procedures; (iii) PFIs have to execute collaterals before making a claim to the State Fund; (iv) most loans are currently under grace periods and/or repayment holidays. Other challenges include the low levels of awareness and preference for interest rate subsidies.

Figure 7: State Fund – PCGs (cumulative)



Source: State Fund.

12. **The State Fund is going through an organizational restructuring and institutional strengthening process.** With technical assistance from the World Bank-funded Ferghana Valley Rural Enterprise Development Project, the fund has taken initial steps to strengthen its operations, including the development of a business plan and financial model for its PCG scheme. In addition, the guidelines of the State Fund were amended in February 2021 to increase flexibility in decision-making, allow the simultaneous use of instruments, and introduce new support through training and microfinance. Under new management since early 2021, the fund has prepared a set of proposals for organizational changes and institutional strengthening reforms, which are pending approval from the MEDPR. The proposal includes increase in staffing, introduction of three independent members in the Executive Board, establishment of new dedicated departments for risk management, internal audit, M&E, and IT, and improvements in the operational features of the PCG scheme. The fund is also exploring long-term options for increasing the independence of the PCG scheme and potentially attracting private investors.



ANNEX 6: Map

COUNTRY: Uzbekistan
Second Rural Enterprise Development Project

