The World Bank

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Report No: PAD5203

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL GRANT

IN THE AMOUNT OF SDR 39 MILLION
(US$50 MILLION EQUIVALENT)
FROM THE INTERNATIONAL DEVELOPMENT ASSOCIATION'S CRISIS RESPONSE WINDOW EARLY RESPONSE FACILITY
TO THE

REPUBLIC OF TAJIKISTAN

FOR THE

STRENGTHENING RESILIENCE OF THE AGRICULTURE SECTOR PROJECT ADDITIONAL FINANCING

November 30, 2022

Agriculture and Food Global Practice
Europe and Central Asia Region

CURRENCY EQUIVALENTS

October 31, 2022

Currency Unit=	Tajik Somoni (TJS)
TJS10.099 =	US$1
US$0.78125=	SDR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Anna M. Bjerde
Country Director:	Tatiana A. Proskuryakova
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ABBREVIATIONS AND ACRONYMS

ACP	Agriculture Commercialization Project
AED PMU	State Institution Agriculture Entrepreneurship Development Project Management Unit under the Ministry of Agriculture of the Republic of Tajikistan
AF	Additional Financing
ALC	Agri-Logistical Center
ASDP	Agriculture Sector Development Program
AWP&B	Annual Work Plan and Budget
CCB	Climate Co-benefits
CIF	Cost, Insurance and Freight
CLMP	Child Labour Monitoring Plan
CPI	Consumer Price Index
CRW ERF	Crisis Response Window Early Response Financing
CSA	Climate Smart Agriculture
DHS	Demographic and Health Survey
DP	Development Partner
ECA	Europe and Central Asia
ECD	Early Childhood Development
EFA	Economic and Financial Analysis
EIRR	Economic Internal Rate of Return
ENVP	Economic Net Present Value
ESCP	Environmental and Social Commitment Plan
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standard
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FSC	Food Security Committee
FSCPP	Food Security Crisis Preparedness Plan
GAIN	Global Alliance for Improved Nutrition
GAM	Global Acute Malnutrition
GBAO	Gorno-Baadakhshan Autonomous Oblast
GDP	Gross Domestic Product
GHG	Green House Gas
GNI	Gross National Income
CGDMP	Children Growth and Development Monitoring Program
GRID	Green, Resilient and Inclusive Development
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IA	Implementing Agency
IEC	Information, Education and Communication
IFC	International Finance Corporation
IFR	Interim unaudited Financial Report
IP	Implementation Progress
IPC	Integrated Food Security Phase Classification
IRI	Intermediate Results Indicator
IYCF	Infant and Young Children Feeding

L2T	Listening to Tajikistan
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MFD	Maximizing Finance for Development
MINT	Ministry of Industry and New Technologies
MOA	Ministry of Agriculture
MOHSP	Ministry of Health and Social Protection
MSNAP	Multi-Sectoral Nutrition Action Plan
MTDP	State Program for Medium-Term Development of the Republic of Tajikistan
NAIP	Nutrition Security and Sustainable Agricultural Development for the Republic of Tajikistan
NSA	Nutrition Sensitive Agriculture
PAD	Project Appraisal Document
PCM	Private Capital Mobilization
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operations Manual
PP	Procurement Plan
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
PRF	Premix Revolving Fund
PTC	Project Technical Committee
REDP	Rural Economic Development Project
RPF	Resettlement Policy Framework
RPO	Regional Project Office
RUTF	Ready-to-Use Therapeutic Food
SCD	Systematic Country Diagnostic
SDG	Sustainable Development Goal
SEP	Stakeholder Engagement Plan
SIP	Social Inclusion Plan
SRASP	Strengthening Resilience of the Agriculture Sector Project
SAM	Severe Acute Malnutrition
SIDA	Swedish International Development Agency
SUN	Scaling Up Nutrition
TA	Technical Assistance
TAJSTAT	Agency of Statistics under President of the Republic of Tajikistan
TOR	Terms of Reference
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	Unites States Agency for International Development
WB	World Bank
WBG	World Bank Group
WFP	World Food Programme
WRA	Women of Reproductive Age

Republic of Tajikistan

Additional Financing for Tajikistan Strengthening Resilience of the Agriculture Sector Project

TABLE OF CONTENTS

BASIC INFORMATION – PARENT (Strengthening Resilience of the Agriculture Sector Project - P175952)

Country	Product Line	Team Leader(s)		
Tajikistan	IBRD/IDA	Teklu Tesfaye Toli		
Project ID	**Financing Instrument**	**Resp CC**	**Req CC**	**Practice Area (Lead)**
P175952	Investment Project Financing	SCAAG (9240)	ECCCA (1608)	Agriculture and Food

Implementing Agency: Ministry of Agriculture

Is this a regionally tagged project?
No

Bank/IFC Collaboration
No

Approval Date	Closing Date	Expected Guarantee Expiration Date	Environmental and Social Risk Classification
18-Jun-2021	30-Jun-2027		Substantial

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach [MPA]	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a Non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

Development Objective(s)

The development objective of the project is to strengthen the foundations for a more resilient agricultural sector in Tajikistan.

Ratings (from Parent ISR)

	Implementation		Latest ISR
	23-Sep-2021	07-Apr-2022	24-Oct-2022
Progress towards achievement of PDO	S	S	S
Overall Implementation Progress (IP)	S	S	S
Overall ESS Performance	S	S	S
Overall Risk	M	M	M
Financial Management	S	S	S
Project Management	S	S	S
Procurement	S	S	S
Monitoring and Evaluation	S	S	S

BASIC INFORMATION – ADDITIONAL FINANCING (Tajikistan Strengthening Resilience of the Agriculture Sector Project Additional Financing - P179851)

Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P179851	Tajikistan Strengthening Resilience of the Agriculture Sector Project Additional Financing	Restructuring, Scale Up	No
Financing instrument	Product line	Approval Date	
Investment Project Financing	IBRD/IDA	22-Dec-2022	
Projected Date of Full	Bank/IFC Collaboration		

Disbursement 30-Jun-2027	No		
Is this a regionally tagged project? No			

Financing & Implementation Modalities

[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a Non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)
[ ] Contingent Emergency Response Component (CERC)	

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
IBRD				%
IDA	58.00	1.20	51.66	2.3 %
Grants				%

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Tajikistan Strengthening Resilience of the Agriculture Sector Project Additional Financing - P179851)

FINANCING DATA (US$, Millions)

SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	58.00	50.00	108.00

Total Financing	58.00	50.00	108.00
of which IBRD/IDA	58.00	50.00	108.00
Financing Gap	0.00	0.00	0.00

DETAILS - Additional Financing

World Bank Group Financing

International Development Association (IDA)	50.00
IDA Grant	50.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Tajikistan	0.00	50.00	0.00	0.00	50.00
Crisis Response Window (CRW)	0.00	50.00	0.00	0.00	50.00
Total	**0.00**	**50.00**	**0.00**	**0.00**	**50.00**

COMPLIANCE

Policy

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

[ ] Yes [✓] No

Does the project require any other Policy waiver(s)?

[ ] 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	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	Not Currently 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).

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Climate Change
Digital Development
Gender
Health, Nutrition & Population

Climate Change and Disaster Screening

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

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Teklu Tesfaye Toli	Team Leader (ADM Responsible)	Senior Agriculture Economist	SCAAG
Aira Maria Htenas	Team Leader	Agriculture Economist	SCAAG
Dilshod Karimova	Procurement Specialist (ADM Responsible)	Procurement Specialist	EECRU
Galina S. Kuznetsova	Financial Management Specialist (ADM Responsible)	Senior Finance Management Specalist	EECG1
Asferachew Abate Abebe	Environmental Specialist (ADM Responsible)	Senior Environmental Specialist	SCAEN
Gulru Azamova	Social Specialist (ADM Responsible)	Social Development Specialist	SCASO
Dilip Kumar Prusty Chinari	Team Member	Finance Officer	WFACS
Farzona Mukhitdinova	Team Member	Senior Water Resources Management Specialist	SCAWA
Giovanni Bo	Counsel	Senior Counsel	LEGLE
Mutriba Latypova	Team Member	Health Specialist	HECHN
Niso Bazidova	Team Member	Financial Management Analyst	EECG1
Nodira Toirova	Team Member	Program Assistant	ECCTJ
Obaidullah Hidayat	Environmental Specialist	Senior Environmental Specialist	SSAEN
Parviz Khakimov	Team Member	Agriculture Specialist	SCAAG

Extended Team

Name	Title	Organization	Location

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Original project objective, design, and scope

1. The Tajikistan Strengthening Resilience of the Agriculture Sector Project (SRASP, P175952) which is the parent project of this additional financing (AF) is fully financed by an IDA grant of SDR 40.4 million (US$58 million equivalent). The SRASP was approved by the World Bank in June 2021 and declared effective in November 2021. The SRASP was designed as part of the World Bank Group's (WBG) response to the Government of Tajikistan's (the government's) request to help mitigate the impacts of the COVID-19 crisis on the economy and people of Tajikistan. Its design was: informed by and aligned with the WBG Tajikistan Country Program Adjustment responding to COVID-19;[1] underpinned by the WBG Approach Paper "Saving Lives, Scaling-up Impact and Getting Back on Track" supporting the "building back better" approach towards recovery from the COVID19 pandemic; and anchored on the principles of Green, Resilient and Inclusive Development (GRID) critical for green transition. The SRASP is also aligned with the State Program for Medium-Term Development of the Republic of Tajikistan (MTDP) 2021-2025, and the Nutrition Security and Sustainable Agricultural Development Program (NAIP) 2021-2030 of the Republic of Tajikistan two strategic documents that call for increased investments in food and nutrition security, knowledge and skills enhancing technologies and innovations, improving the delivery of agricultural support services, promoting agri-logistical infrastructure, establishing a vibrant seed, seedling and planting material system, and improving public capacity for crises prevention and management (early warning and preparedness).

2. The SRASP's development objective (PDO) is to strengthen the foundations for a more resilient agricultural sector in Tajikistan. The SRASP consists of four components and nine sub-components.

(a) *Component 1: Strengthening seed, seedling, and planting material systems (US$27.7 million)* supports the development of viable seed, seedling, and planting material systems to ensure the availability of improved, locally adapted, market oriented, farmer-preferred, and climate resilient seeds, seedlings, and planting materials for priority crops, and in sufficient quantity and acceptable quality. The component has four sub-components: (1.1) Enabling environment (US$0.3 million); (1.2) Research and Development (US$5.0 million); (1.3) Multiplication of seeds, seedlings, and planting materials (US$19.2 million); and (1.4) Quality assurance (US$3.2 million).

(b) *Component 2*: *Support investments in Agri-Logistical Centers (ALCs) for horticulture value chains (US$14.0 million)* supports investments in ALCs to improve the competitiveness of horticulture value chains and improve the access to markets (e.g., domestic retail chains and export). The component has two sub-components: (2.1) Support the establishment and operation of ALCs (US$13.7 million); and (2.2) Capacity building for operation and management of ALCs and awareness raising (US$0.3 million).

[1] The World Bank Group's (WBG) engagement in Tajikistan is guided by the FY19-FY23 Country Partnership Framework (CPF) (Report Number 135875-TJ, discussed by the Board of Directors on May 9, 2019), which is built on three focus areas: i) human capital and resilience; ii) public institutions and sustainability; and iii) private-sector growth and market creation.

(c) *Component 3: Strengthen public capacity for crises prevention and management (US$13.3 million)* supports strengthening relevant public institutions' capacity for effective and efficient agricultural crises prevention and management, focusing on selected programs, which can significantly enhance the resiliency of agricultural sector and the country's preparedness in responding to future shocks. The component has three sub-components: (3.1) Real-time monitoring of agricultural production, land use, and agrometeorology (US$5.7 million); (3.2) Soil fertility management (US$3.1 million); and (3.3) Crop protection and locust control (US$4.5 million); and

(d) *Component 4: Project management and coordination (US$3.0 million)* supports all aspects of project management including: (i) management, coordination and implementation; (ii) monitoring and evaluation (M&E); (iii) fiduciary and safeguard compliance, (iv) technical assistance (TA); and (v) a grievance redress mechanism (GRM).

3. The SRASP's primary target beneficiaries are farmers, both smallholders *(dehkans)* and large-scale commercial farmers, agri-businesses, exporters, and other value chain actors, as well as staff of public agricultural institutions, from agricultural researchers and extension field officers to staff working in various departments of the Ministry of Agriculture (MOA) and public agencies in the local government as well as public and private seed farms and nurseries.

4. The SRASP is open to beneficiaries across the country (Components 1 and 3), while the ALCs supported under Component 2 will be located one each in Khatlon, Sughd, and Dushanbe regions selected for their agro-ecological potential, horticultural production patterns, export opportunities (the case for Khatlon and Sughd), and proximity to major urban market (in the case of Dushanbe). The sub-sectoral focus of the ALCs is horticulture.

5. MOA is the lead implementing agency (IA) of the SRASP with the overall responsibility for coordinating all aspects of the SRASP, including contributions by the different relevant ministries and agencies participating in the project's implementation. The MOA is supported by a project implementation unit (AED PMU) fully staffed with relevant specialists, including fiduciary and safeguards, which follows the day-to-day implementation, management, and coordination of the project. The MOA is also supported by a Project Steering Committee (PSC), a Project Technical Committee (PTC) that have already been established and functional and an international technical assistance (TA) that has already been recruited.

B. Current performance of the SRASP

6. As of today, all dated covenants have been complied with, and implementation of planned project interventions has commenced and is progressing as per schedule. According to findings of the most recently held implementation support mission, which took place during October 1-8, 2022, progress towards achievement of the PDO and Implementation Progress (IP) were assessed as Satisfactory.

7. For its initial year of implementation, the project made good progress on the operationalization of its institutional and implementation arrangements, including establishment of the PSC and PTC; establishment of the project implementation unit (AED PMU) at headquarters (Dushanbe) and Regional Project Offices (RPOs) in the two project implementing regions (Sughd, and Khatlon) and a project focal person in Bokhtar and Gorniy-Badakhshan (GBAO); and approval of the annual work plan and budget (AWP&B) for FY22/23. The first few

months of project implementation also saw two project launch events, and the procurement and distribution to seed farms of elite and super elite seeds of wheat and fertilizer, and basic goods and services to the AED PMU and RPOs. The recruitment of international and national consultancy services as well as the TA that are required to support the government in implementing project interventions under the various components and sub-components is at an advanced stage. Most of the Terms of Reference (TORs) for national and international consultancy services that are to be acquired in the FY22/23 budget year have been finalized and procurement is underway. TORs for national and international consultancy services that will be needed in subsequent budget years have also been reviewed and cleared by the World Bank (WB). The recruitment of the international TA has been finalized, and the contract signed.

8. Disbursements under the SRASP, although currently low, are expected to increase over the coming months as implementation of project activities picks up**.** As of October 30, 2022, overall disbursements under the SRASP were US$1.20 million (or 2.27 percent). Contracts worth US$4.3 million have already been signed, procurement processes started, and delivery of goods and services is expected soon.

9. The SRASP is being implemented under the Bank's Environmental and Social Framework (ESF). Both environmental and social risk ratings are Substantial for the project. The following ESF instruments acceptable to the Bank have been prepared, consulted up on and disclosed on May 4, 2021, including: (i) Environmental and Social Management Framework (ESMF); (ii) Resettlement Policy Framework (RPF); (iii) Stakeholder Engagement Plan (SEP); (iv) Environmental and Social Commitment Plan (ESCP); and (v) Labor Management Procedures (LMP). An Environmental Specialist and a Social Development Specialist have been on board and engaged in ensuring ESF compliance of project implementation as per the approved ESCP. The Social Development Specialist has finalized the preparation of the Social Inclusion Plan (SIP) and Child Labor Monitoring Plan (CLMP), which are part of the Project Operations Manual (POM). According to the most recently held implementation support mission, environmental and social risks management is assessed as Satisfactory.

10. The SRASP's financial management (FM) arrangements are adequate and meet the minimum requirements of the Bank's Policy and Directive on Investment Project Financing. The FM arrangements continue to be Satisfactory, including staffing. The AED PMU has installed the C1 accounting software, which was a dated covenant, and the FM Specialist has started entering data in the accounting system and preparing and submitting interim unaudited financial reports (IFRs). The SRASP's procurement arrangements continued to be Satisfactory. The AED PMU has continued to revise the Project Procurement Strategy for Development (PPSD) and the associated Procurement Plan (PP), reflecting changes that have been observed since the project was negotiated and became effective. The AED PMU has also employed the required Procurement Specialist and is in the process of recruiting an Assistant Procurement Officer. The AED PMU has documented, and continues to do so, all procurement activities using the systematic tracking of exchanges in procurement (STEP). According to findings of the most recently completed implementation support mission, fiduciary compliance is assessed as Satisfactory.

11. The SRASP has a project specific GRM, which is part of the SEP, and functions at the local/contractor and national/AED PMU levels. At the local/contractor level, contractors are expected to establish and maintain a GRM for the communities. Since contracts have not been awarded as of yet, these have not been established. At the national/AED PMU level, a Grievance Management Group comprising representatives of relevant state

agencies is expected to be established soon. It will be chaired by the AED PMU Director, and the AED PMU Social Development Specialist will serve as Secretary. The Social Development Specialist will also serve as a national Focal Point responsible for documenting/filing grievances and appeals received directly or escalated from contractors. The Focal Point is also responsible for summarizing the number and types of all complaints and issues received from project workers from target regions. The project is at its early stage of implementation hence no complaints have been received and proceesed thus far.

C. Background and Rationale for additional financing

12. **Sectoral context – food security, nutrition, and agriculture.** Food insecurity has been a lingering issue in Tajikistan. The economic fallout from the war in Ukraine poses a severe risk to food security in Tajikistan, which has compounded the earlier adverse impacts of the COVID-19 pandemic on livelihoods, jobs and incomes from remittances, and the effects emanating from the growing risk of insecurity in Afghanistan, making Tajikistan a hotspot of food insecurity in the Europe and Central Asia (ECA) region. As of August 2021, already only 34 percent (39 percent in urban and 31 percent in rural areas) of the World Food Programme (WFP) surveyed households were classified as food secure.[2] Most food insecure households reside in the countryside (21 percent in rural areas vs 16 percent in urban areas) and the majority of those (27 percent) are female-headed households (vs 18 percent male-headed).[3] By the end of 2022, the number of moderately food insecure and severely food insecure people in Tajikistan is expected to reach 2.9 million and 0.83 million (vs 2.0 million and 0.04 million in August 2021) respectively, which is 30 percent and 8.6 percent of country's population (vs 20 percent and 0.4 percent in August 2021), respectively. Even before the COVID-19 pandemic and the war in Ukraine, seasonal food deprivation was pervasive and a persistent trend in Tajikistan: the winter and spring months are associated with an increase in the share of the population with consumption below the 'extreme' poverty line. The risk of a food security crisis is exacerbated by declines in expected agriculture harvest due to lack of high-quality and well adapted seeds, seedlings and planting materials or use of low-quality seeds, seedlings, and planting materials; and no or reduced application of fertilizers; shifts in monthly rainfall patterns due to climate change; higher inflation for food items and key agricultural inputs and reduced purchasing power of the households; and restrictive trade policies in food exporting countries.

13. Despite significant progress made over the last decade, malnutrition among children and women remains a major challenge for the country. Malnutrition is a critical public health concern, particularly in remote and rural areas and this has been the case long before the above-mentioned crises.[4] Research conducted by the United Nations Children's Fund (UNICEF) in 2016[5] found that 6–24-month-old children commonly consume an extremely non-diverse basket of food in Tajikistan, concentrated in starchy staples and dairy. Insufficient

[2] World Food Programme (WFP), April 2022. Food Security Update and implications of Ukraine Conflict in Tajikistan. Available at https://docs.wfp.org/api/documents/WFP-0000139165/download/

[3] WFP, April 2022, Food Security Update, and implications of Ukraine Conflict in Tajikistan. Available at https://docs.wfp.org/api/documents/WFP-0000139165/download/

[4] Statistical Agency under President of the Republic of Tajikistan, 2018. Tajikistan 2017 Demographic and Health Survey (DHS).

[5] Ministry of Health and Social Protection (MOHSP), United Nations Children's Fund (UNICEF), World Bank, 2016. National Nutrition Survey in Tajikistan. Available at https://www.unicef.org/tajikistan/media/491/file/National%20Nutrition%20Survey%20in%20Tajikistan%202016%20.pdf

meal frequency is also common, particularly for 6–8-month-old infants. A child born in Tajikistan today will be only 50 percent as productive when he or she grows up as he or she could be if he or she enjoyed complete education and full health.[6] Tajikistan has also the highest rate of stunting in ECA with 18 percent of children under the age of 5 years being stunted and suffering from chronic nutritional deprivation and infectious diseases. In addition, more than 8 percent of children in Tajikistan are underweight and 6 percent are wasted (i.e., suffering under Global Acute Malnutrition, GAM). The country has high rates of anemia (42 percent) among women of reproductive age (WRA) which continues to negatively affect maternal and newborn nutrition outcomes.[7] Moreover, there is little awareness among women in Tajikistan, especially in remote areas, on the importance of prenatal micronutrient intake and the impact micronutrient deficiencies in the first two years of a child's life can have as they can cause irreversible damage to physical and cognitive development with devastating impacts not confined to the individual or household level. A 2016 cost-benefit analysis[8] calculated the losses to Tajikistan from death, disease, and lost productivity from malnutrition to potentially reach US$878 million by 2026. Adequate nutrition is essential to grow, learn, earn, and lead, and improving nutrition outcomes is an investment into Tajikistan's future human capital and prosperity.

14. Apart from agriculture, another critical source of income that supports the lives and livelihoods of the Tajik population is remittances, received largely from migrant workers in Russia, with more than 80 percent of remittances used for food consumption and procurement of basic agricultural inputs.[9] According to the Listening to Tajikistan (L2T) surveys, one third of all households, and 40 percent of the poor, receive remittance income to support their livelihoods. As a result of the slowdown of Russia's economy first due to COVID-19 pandemic and now due to Russian invasion of Ukraine and the associated sanctions (second consecutive income shock), a sharp decline in labor demand in Russia has already led to job losses of Tajik migrants thereby affecting incomes and ultimately lives and livelihoods of many Tajik households rendering them vulnerable to food and nutrition insecurity. Already in 2021, one-third of Tajik households experienced a decline in their incomes and shrinking purchasing power due to job losses and price spikes for food items, agricultural inputs and fuel.[10] Possible further declines in remittances, and consequently reductions in households' income and domestic consumption are expected to have outsized impacts on food and nutrition security since remittance income in Tajikistan is primarily used to supplement food consumption and purchase of basic agricultural inputs.[11]

15. The COVID-19 pandemic led to inflation and a slowdown of the economy in 2020 that has affected the poor the most. While considerable economic recovery was observed in 2021, the economy contracted in 2022 (-0.4 percent).[12] Food inflation has been posing a significant threat to food and nutrition security leading to the erosion of the real purchasing power of Tajik households. Food prices in Tajikistan rose faster than the

[6] WB, 2020. Human Capital Index (HCI) 2020 Update: Human Capital in the Time of COVID-19.
[7] ibid.
[8] Global Alliance for Improved Nutrition (GAIN), 2016. Report on Analysis of Economic Losses Due to Iron and Folic Acid Deficiencies in Tajikistan. Available at https://www.gainhealth.org/sites/default/files/publications/documents/food-fortification-in-tajikistan-2016.pdf
[9] WFP, April 2022.
[10] WFP, April 2022.
[11] At more than 80 percent in 2022, the share of remittance income spent on food is the highest of any other Central Asian countries. Source: WB, Listening to Central Asia surveys, April 2022.
[12] World Bank (WB), Tajikistan Macro-Poverty Outlook, Spring 2022, June update.

general consumer price index (CPI) and CPI for non-food items in the last three consecutive years. Moreover, the cost of living in Tajikistan has been consistently increasing. The cumulative inflation reached about 40 percent over the last four years. According to the Agency of Statistics under President of the Republic of Tajikistan (TAJSTAT), prices climbed by 124 percent for petrol, 98 percent for vegetable oil, 67 percent for sugar and 22 percent for beef between July 2020-May 2022. However, the actual inflation rate is estimated to be higher than the officially reported numbers due to weak institutional capacity and high-level political interventions. For example, the WFP statistics[13] for the last 1.5 years indicate that wheat flour prices increased by 48 percent compared with 23 percent reported by TAJSTAT. A comparison of three types of price developments (Global Price, CIF Price at Tajik Border, Consumer Price) at the commodity level (2022 vs 2021 and 2021 vs 2020) indicates that consumer prices for wheat, sugar, vegetable oils, meat and dairy products increased at a much faster pace and the increase has been significant, while global and CIF prices at Tajik border increased at a comparatively lower pace or even decreased for some products.

16. Despite a large agricultural sector (22 percent of Gross Domestic Product, GDP), 19 percent of export and 61 percent of employment), food and nutrition security at the national level in Tajikistan remains highly dependent on imports to cover the country's food and nutrition needs and avail agriculture inputs.[14] Disruptions in agricultural input markets are a major source of vulnerability in general and food and nutrition insecurity in particular i.e., price changes of agricultural inputs in global markets affect domestic producers and consumers due to an increase in the costs of agricultural inputs, particularly seeds and fertilizers thereby affecting food and nutrition security. According to TAJSTAT, imports of fertilizers contracted by three times in the first quarter of 2022 compared to the same period in 2021 due to the worsening payment capacity of farmers.[15] A significantly large proportion of rural households in Tajikistan will not have access to quality seed, seedling, and planting material and other necessary and required agricultural inputs, including fertilizers, to plant their main subsistence crops for the coming cropping season. Without external assistance this year, fields will either go unplanted, will be planted late, or will be planted with poor quality seeds and less or no fertilizer leading possibly to food availability and access constraints. Overall, global price increases for food products and agricultural inputs have led to a price increase for both domestically produced and imported agricultural products, exacerbating food and nutrition insecurity and inflation.[16] According to the Bank's Food Security Hub indicative vulnerability analysis, Tajikistan scores the highest in food exposure (4/4), is vulnerable in terms of socio-economic factors (3/4) and is mid-range in terms of macroeconomic and fiscal factors (2/4), amounting to an overall vulnerability score of 3/4 as of May 8, 2022.[17]

17. **Institutional context.** The institutional context governing food and nutrition security in Tajikistan is weak, fragmented and insufficiently coordinated due to inadequate institutional, legal, and regulatory

[13] WFP, May 2022, Impact of Price Rise on Vulnerable Population in Tajikistan, Special Update.
[14] Tajikistan is a net importer of wheat, vegetable oils, sugar, and most tropical fruits, while other agricultural products (beef, mutton, poultry meat, eggs, potatoes, onion, carrot, other vegetables, gourd, legumes, etc.) are produced domestically in sufficient quantity. Some agricultural products exceed domestic demand and are being exported (e.g., onion, carrot, poultry meat and eggs). Domestically produced wheat and vegetable oils satisfy the domestic market needs by only 46 and 33 percent, respectively (MOA, 2022). Tajikistan is also a net importer of fuel, fertilizers, and seeds.
[15] Customs Services, Government of Tajikistan, 2022.
[16] WB, April 2022 Commodity Markets Outlook.
[17] Gautam, Madhur, and Joshua Gill. Vulnerability Heat Map, May 8, 2022.

frameworks and enforcement practices, as well as lack of clarity and overlaps in the roles and responsibilities of the various actors involved in promoting the food and nutrition agenda. On one hand, the Food Security Committee (FSC) is expected to represent the country and coordinate the donor community on issues of food and nutrition security importance. Despite its name, however, it is the authoritative body in the fields of food safety, and sanitary and phytosanitary measures, including such services as veterinary and medicine, phytosanitary and plant quarantine, plant protection, and seed regulation and breeding. The MOA on the other hand is authorized to develop short-, medium-, and long-term development programs that contribute to food and nutrition security, as well as policies and regulatory acts for a unified state agricultural policy. Nevertheless, a review of the Charters of MOA and FSC indicates that neither is responsible for ensuring food and nutrition security. These inconsistencies call for a review of the institutional and implementation arrangements governing food and nutrition security.

18. The regulatory framework of food and nutrition security is weak and outdated**.** The Food Security Law which was enacted in 2010 and revised in 2019 does not provide a clear structure for ensuring food and nutrition security. Moreover, the Law is centered on self-sufficiency rather than food and nutrition security hence outdated. The definition of food and nutrition security included in the Law is not in line with the international understanding and the definition employed in the Sustainable Development Goals (SDGs). The Law does not allow for the development of an efficient response for early warning and swift action to address emerging food and nutrition security risks and prioritize increased resilience. Its revision is required especially with regard to defining the roles and responsibilities of the FSC and MOA and to ensure coordination and harmonization of efforts among stakeholders, including the donor community and private sector.

19. Tajikistan has been among the 15 countries that have regularly been selected for inclusion in the Global Report on Food Crises but is subsequently excluded because of recurrent data gaps or lack of sufficient evidence to produce estimates of food insecure people. The Integrated Food Security Phase Classification (IPC) methodology was first piloted in Tajikistan in 2007, but the initiative stalled despite the government (in particular through the Food Security Unit in the MOA) having played a leading role in cooperation with other national partners, in particular the UN and non-governmental organizations. With the aim to revitalize the process and address the data challenges, as well as to ascertain the exact magnitude of food insecurity in the country, FAO, UNICEF, and WFP are jointly re-introducing the IPC methodology in the country.[18] Currently, the first part of the IPC exercise is on-going i.e., a household survey is underway to collect data on key food security indicators at the sub-regional level. This will be followed by the second part of the IPC process, which pertains regional IPC working group meetings with representation from all districts of Tajikistan followed by regional and national level workshops to validate and endorse the results. The intended outcome of the IPC exercise is a strengthened food and nutrition security monitoring system to measure the impact of shocks, including the war in Ukraine, that can provide data and information to decision makers to prevent, mitigate, or decrease food insecurity that threatens lives or livelihoods. The country needs to sustain the food and nutrition security monitoring exercise by financing the household survey periodically.

[18] FAO and WFP Joint Program on “Improved Food Security in Tajikistan.” 2022. Joint SDG Fund, Development Emergency Modality – Response to the Global Crisis on Food, Energy, Finance.

20. Food fortification initiatives have been under implementation in Tajikistan since the late 1990s and early 2000s, but food fortification became mandatory only in 2019 with the adoption of the food fortification legislation.[19] This law prescribes that wheat flour (premium and first grades), milk (dairy products), edible salt, sugar, and other necessary primary products are to be fortified with micronutrients, vitamins, and minerals. In addition to the law, in 2021 the government adopted the Program for the Prevention of Micronutrient Deficiency and Related Diseases among the Population of the Republic of Tajikistan for 2022-2027. The purpose of this Program is to prevent micronutrient deficiencies and related diseases (goiter, night blindness, scurvy, anemia, neural tube defects, etc.), by strengthening the legal framework, enhancing coordination, and ensuring quality control of fortified foods. Given the high prevalence of iron and iodine deficiencies, the first primary food vehicles for fortification in Tajikistan include edible salt with potassium iodate/iodine and wheat flour (premium and first grades) with micronutrient and vitamins premix. The iodization of salt has been undergoing for several years now, but it has faced some challenges lately, including lack of fund to procure potassium iodate. The fortification of wheat flour has been hampered by failure to implement the food fortification legislation, including developing by-laws and other regulatory documents related to food fortification standards, M&E, lack of funds to procure premix, lack of premix in the market, weak coordination among stakeholders, and lack of proper knowledge and understanding of the population about the importance of daily consumption of micronutrients and vitamins and fortified food products. Initiatives undertaken by development partners to support the government in food fortification efforts have all been challenged by factors that were mentioned earlier, including the lack of funds to procure quality premixes.

21. In sum, the rapidly changing and volatile geopolitical situation and political economy of the region in particular and the world at large; higher food, fertilizer, and energy prices; and the decline in remittance incomes in the aftermath of the war in Ukraine are presently the main economic drivers of acute food and nutrition insecurity in Tajikistan, which is especially severe for vulnerable rural households, whose livelihoods heavily depend on agriculture and remittance incomes. These come on top of pre-existing chronic and seasonal food insecurity and alarming malnutrition rates that have prevailed in the country for so long. As the coping capacity of vulnerable populations is exhausted, the effect of the current crisis on food and nutrition insecurity is likely to be more profound and long-lasting. Moreover, communities in conflict-affected areas such as at the Kyrgyz-Tajik border in the Ferghana Valley are at risk of conflict-driven food and nutrition insecurity. Thus, Tajikistan faces a very fragile food and nutrition security situation and needs an emergency response program, including ensuring farmers' access to key agricultural inputs, such as seeds, seedlings, planting materials and fertilizers to prevent a significant worsening of food security at the national level, and concerted efforts to improve nutrition outcomes, including the procurement and distribution of micronutrients, vitamins, and ready-to-use therapeutic foods (RUTFs) for women and children that are prone to severe acute malnutrition (SAM). Moreover, investments are needed to enable public institutions to have early estimates of agricultural production and crop yields, determine potential food shortages, and anticipate crises and take early preparedness and response actions. Investments aimed at enhancing the long-term resiliency of the agricultural sector are also critical, including in ALCs.

[19] The Republic of Tajikistan Law as of July 19, 2019, № 1635 «on Provision of fortified food products to the population"

II. DESCRIPTION OF ADDITIONAL FINANCING

A. Changes to objective, design, and scope

22. The US$50 million equivalent grant funds made available through the IDA20 Crisis Response Window Early Response Financing (CRW ERF) as additional financing to the SRASP (SRASP AF) will support the government's effort in responding to the food and nutrition security emergency and in building resilience. The proposed SRASP AF will primarily focus on addressing the short-term food and nutrition emergency needs but will also finance some medium- to long-term investments that enhance resilience of the agricultural sector. The funds will co-finance project activities planned under the various components and sub-components of the SRASP as well as new project activities planned under a newly proposed nutrition sub-component. As such the SRASP AF will finance: i) review of the food security law, and institutional and implementation arrangements governing food and nutrition security, ii) the development of a food security crisis preparedness plan (FSCPP) within six months of project effectiveness[20]; iii) the procurement and distribution of emergency seeds, fertilizers and small-scale innovative farm machinery to vulnerable dehkan farmers, including women; iv) the establishment and operationalization of additional ALCs; v) capacity building of public institutions for crises prevention and management; vi) the rolling out (to complement existing efforts) of the IPC methodology; vii) the establishment of a Premix Revolving Fund (PRF) to support the government in its food fortification effort by availing seed funds to procure and distribute quality micronutrient premixes and potassium iodate, and capacity building of the agency that will host PRF; viii) the procurement and distribution of micronutrient and vitamin supplements for pregnant and lactating women and young children (6-59 months), and RUTFs for children with a risk of SAM, including media and communication campaign on the importance of healthy and diverse diets and of micronutrients intake; consequences of micronutrient deficiencies; good infant and young children feeding (IYCF) practices; and other critical nutrition messages; and ix) the implementation of priority nutrition-sensitive agriculture interventions, including nutrition messaging and capacity building of the MOA staff e.g. trainings, study tours, exchange visits, conference participation on nutrition sensitive agriculture programming. The SRASP AF will also finance measures that help the government in addressing acute bottlenecks in food distribution and production systems, the development of an M&E framework to provide timely and reliable information to support informed decision-making in managing food and nutrition security; and capacity building e.g., training of vulnerable groups and women on seeds, seedlings and planting material production, and the use of small-scale innovative farm machinery.

23. The SRASP design, component and sub-component structure and objectives will remain largely unchanged with the exception of Component 3 where an additional sub-component is proposed on the planned nutrition activities. The Project Development Objective (PDO) of the SRASP will be revised to reflect the nature of activities that are being financed through the SRASP AF especially as they relate to emergency operations i.e., food insecurity and nutrition needs. The proposed PDO of the SRASP AF is *to strengthen the foundations for a more resilient agricultural sector and support emergency interventions to address food and nutrition security in Tajikistan*. An additional PDO and intermediate results indicators (IRIs) will be added to capture the food and nutrition aspect of the SRASP AF. Targets for parent project PDO indicators and IRIs will

[20] The preparation of a FSCPP is a requirement under the CRW financing.

be revised and/or scaled up to reflect higher values for indicators linked to activities that will receive additional resources.

24. The proposed SRASP AF will follow the same geographic focus and selection criteria as the SRASP, while the new Sub-component 3.4 will have nationwide coverage. Beneficiaries will be expanded due to the increased resources and outreach, and also to include beneficiaries of the emergency operations i.e., seed, fertilizer, small-scale innovative farm machinery, micronutrients, and vitamin supplements, RUTFs, PRF, and nutrition-enhancing agricultural activities. Under the proposed SRASP AF, beneficiaries (rural households) for the agriculture-related activities (seeds, fertilizers and small-scale farm machinery) will be identified through the Farmers' Registry maintained by TAJSTAT and based on a household survey that will be conducted to identify vulnerable dehkan farmers, including women, before Effectiveness.[21] Proposed nutrition activities under the proposed SRASP AF will target pregnant and lactating women and young children (6-59 months), the selection of which will be based on the Demographic and Health Survey (DHS) of 2017 and screening that will be carried by the local primary healthcare facilities, while children to receive RUTFs i.e. children with SAM will be screened by the local primary healthcare facilities. In terms of food fortification, all operating wheat flour producers (currently 37 private wheat milling companies and four state-owned milling companies) and edible salt producers (currently 16 producers) will have access to the premix through PRF. The SRASP closing date of June 30, 2027 will be retained. The SRASP AF will co-finance and/or finance the following activities:

25. The SRASP AF is also aligned with the WBG's Global Crisis Response Framework (GCRF) paper *"Navigating Multiple Crises, Staying the Course on Long-Term Development: The World Bank Group's Response to the Crises Affecting Developing Countries.*" The SRASP AF is aligned with Pillar 1 Responding to Food Insecurity through supporting production, facilitating trade, supporting the vulnerable and investing in sustainable food systems (component 1 and 2), Pilar 3 Strengthening Resilience by identifying and supporting paths to build long-term resilience (component 2 and 3), and Pilar 4 Strengthening Policies, Institutions and Investments for Rebuilding Better to utilize long-term policies to improve development outcomes (component 2 and 3).

26. ***Component 1: Strengthening seed, seedling, and planting material systems (US$25.7 million).*** The objectives and sub-component structure of the component will remain the same. The proposed SRASP AF will finance the following activities aimed at improving the enabling environment, and ensuring the availability of improved, locally adapted, market oriented, farmer-preferred, and climate resilient seeds, seedlings, and planting materials for priority crops, in sufficient quantity and quality:

A. Under *Sub-component 1.1: Enabling environment (US$0.35million)*, the proposed SRASP AF will increase the amount of funding allocated to this sub-component (co-financing), and the objective of the sub-component will be broadened to include food and nutrition security. The additional resources allocated to the sub-component will help the government to: (i) develop a FSCPP (funded by counterpart funding), (ii) review the existing Food Security Law No. 1591 (April 2019); and (iii) review the institutional and implementation arrangements governing food and nutrition security.

[21] Indicative criteria include less than three hectares (ha) land plot and access to water.

(i) The FSCPP is a national plan detailing the operational arrangements for: (i) continuously monitoring and identifying food security and nutrition (FSN) crises; (ii) convening programmatic leads across government, humanitarian, and development partners (DPs) to assess emerging crisis risks and scale up early action; (iii) convening senior officials to recognize an emerging crisis and bridge operational and funding gaps. It has three elements: *Element 1: Monitoring and Identifying FSN Crisis Risks* - helps to identify the country's main FSN crisis risks, and the process for monitoring and reporting these risks, the definition of "crisis", and whether arrangements are in place to share crisis risk information with programmatic leads to promote collective early action. *Element 2: Convening FSN Programmatic Leads* - defines the body or forum for convening FSN programmatic leads across government, humanitarian, and development partners, and its role in assessing emerging crisis risks and mobilizing joined up and early responses. It also helps to ascertain if defined timebound protocols are in place for escalating worsening risks and additional needs to senior officials. *Element 3: Convening Senior Officials* - helps to identify the dedicated body or forum for convening senior officials around emerging FSN crisis risks, and the procedures for senior officials to collectively recognize and raise the profile of an emerging crisis. The FSCPP will also serve as part of an M&E system for implementation of the Agriculture Sector Development Program (ASDP) 2022-2030. The Ministry of Agriculture is committed to provide the resources needed to carry out the required activities in a timely manner, particularly the preparation of the FSCPP, which needs to be financed out of the Government's own resources and the finalization of which shall be concluded no later than 12 months after the Effective Date.

(ii) The Food Security Law of Tajikistan, which was issued on December 21, 2010 (No. 671) and amended on April 4, 2019 (No. 1591) is outdated, not comprehensive and is not in line with the SDG definition. It also does not include the concept of nutrition. It is high time that it is updated hence the need for a thorough review which will help identify policy and legislation gaps, especially with regard to the roles of the FSC and MOA to ensure coordination and harmonization of the efforts between stakeholders, including the private sector. Moreover, it will support the incorporation of the notions of food and nutrition security in order to align the law with concepts utilized internationally and to enable early warning and response to address emerging food and nutrition security risks and prioritize increased resilience. The SRASP AF will finance the recruitment of consultants who would assist the government in reviewing the Food Security Law; organization of events to consult on the draft Food and Security and Nutrition Law; organization of events to create awareness and popularize the newly developed Food and Security and Nutrition Law e.g., workshops, seminars etc.; including preparation of workshop or seminar materials, workshop or seminar venue fees, etc.; capacity building (trainings, workshops etc.) of government agencies and private sector that would be involved in the implementation of the newly developed Food and Security and Nutrition Law; and operating costs incurred as part of the review and development of Food and Security and Nutrition Law.

(iii) The institutional and implementation arrangements governing food and nutrition security are fragmented and suffer from lack of clarity of the roles and responsibilities of the various actors involved, weak coordination among the actors ultimately leading to the inability of the country to address food and nutrition insecurity effectively and in a sustainable and meaningful way. Properly

designed and implemented institutional and implementation arrangements will enable the country to engage in food and nutrition production on the basis of proper targeting and use and management of natural resources for the purpose of providing the population with food and nutrition, and of promoting the agriculture, food, and nutrition industry. A thorough review of the situation will help identify gaps in the institutional and implementation arrangement, including addressing current fragmentation and insufficient coordination between the MOA and FSC and propose optimum institutional and implementation arrangements. The SRASP AF will finance the recruitment of consultants who would assist the government in the review of institutional and implementation arrangements governing food and nutrition security; organization of consultations events on the draft institutional and implementation arrangements; organization of events to create awareness and popularize the newly proposed institutional and implementation arrangements; including preparation of meeting materials, conference venue fees, etc.; capacity building (trainings, workshops etc.,) of government agencies that would be involved in the implementation of the newly proposed institutional and implementation arrangements; and operating costs incurred as part of the review of institutional and implementation arrangements.

B. Under *Sub-component 1.3: Multiplication of seeds, seedlings, and planting materials (US$25.35 million)*, the proposed SRASP AF will scale up the sub-component scope by financing the procurement and distribution of seeds, fertilizers, and small-scale innovative farm machinery targeting vulnerable dehkan farmers, including women for homestead gardening, as a short-term food security and nutrition crisis response as well as simplifying women's drudgery. To improve the access to irrigation of dehkan farmers and women who will benefit from seeds, fertilizers, and small-scale innovative farm machinery, the SRASP AF will finance rehabilitation of existing irrigation schemes through installation of energy efficient irrigation pumps and small works for rehabilitation of existing irrigation networks, including replacement of outdated non-performing pump units servicing existing irrigated land areas, as well as minor (emergency-type) rehabilitation of off-farm and on-farm irrigation infrastructure. These investments will improve reliability of irrigation water delivery during the extended period of droughts and reduce the energy intensity of irrigation in the selected small-scale irrigation schemes. Selection of pump stations for rehabilitation will consider the potential for energy efficiency improvements. Selection criteria for prioritization of pump stations and replacement of pump units will be identified in the POM and shall include schemes demonstrating (i) considerable scope in reduction of electricity consumed per unit of water used for irrigation; (ii) demonstrated capacity and plans of dehkan farmers and women to diversify agriculture production for food crops; (iii) number of beneficiaries accounting for not less than 60 percent of the scheme area; (iv) availability of water users association (WUAs) able to support delivery of on-farm irrigation services and agriculture extension services. The proposed SRASP AF will also finance capacity building of beneficiaries of the emergency interventions e.g., training of dehkan farmers and women on seeds, seedlings and planting materials production and the use of small-scale innovative farm machinery, and knowledge exchange events such as farmers' field days and traveling workshops. The SRASP AF will also finance operating costs incurred in the process of implementing emergency interventions, including procurement and distribution of seeds, fertilizers, and small and innovative farm machinery, installation of energy efficient irrigation pumps and small works for rehabilitation of existing irrigation networks as well as capacity building initiatives. The proposed SRASP AF will also support potential additional measures

that may address the acute bottlenecks in food and nutrition distribution and production systems, including those that target vulnerable dehkan farmers, returning migrants, and women.

27. ***Component 2: Support investments in ALCs for horticulture value chains (US$11.0 million).*** The objectives and sub-component structure of the component will remain the same. The quantity and quality of Tajik horticulture produce remain low, and infrastructure for cold storage,[22] sorting, grading, and processing (i.e., agri-logistical services) is still rudimentary. Thus, even when production of fruits and vegetables grows, there are no facilities for storing and post-harvest handling of these perishable products, so their supply is short and highly seasonal thereby contributing to the food and nutrition insecurity. The proposed SRASP AF will allow the component to scale up activities by supporting the establishment and operationalization of additional ALCs. The ALCs will help in improving the capacity of the government to provide food and nutrition access to its population by increasing its capacity to produce, store, process, and avail sufficient and high-quality food. The ALCs will also help the government in building resilient food systems, promoting agricultural diversification hence contributing to food and nutrition security, ensuring better market linkages, and improving competitiveness of horticulture value chains and access to markets.

(a) Under *Sub-component 2.1: Support the establishment and operation of ALCs (US$11.0 million),* the proposed SRASP AF will support (co-finance) the establishment and operationalization of two additional ALCs in geographical locations to be identified following the same procedure and operation and management modality as in the SRASP. The ALCs, including their design feature (small in size i.e., up to US$5 million) and services the ALCS are anticipated to provide i.e., cooling, storage, packing, logistic facilities etc. will also be the same as the ALCs planned under the SRASP. The SRASP AF will finance: (i) the recruitment of an international consultancy firm who would be engaged in the preparation of feasibility studies, business plans, environmental and social impact assessments, detailed designs, and construction supervision plans; (ii) the construction of the ALCs (civil works); (iii) construction supervision; and (iv) provision of equipment for operation of the ALCs– pre-cooling, sorting, grading, and packing lines as well as cold storage units and an operational management software. The SRASP AF will also finance operating costs incurred in the process of establishing the ALCs.

28. ***Component 3: Strengthen public capacity for crises prevention and management (US$12.3 million).*** The objectives of the component and sub-components will remain the same. The proposed SRASP AF-will allow the component to include additional activities that will further strengthen the capacity of the public sector to prevent and manage crises, and a new sub-component that will help improve nutritional outcomes.

(a) Under *Sub-component 3.1: Real-time monitoring of agricultural production, land use, and agrometeorology (US$7.3 million),* the proposed SRASP AF will expand (co-finance) the scope of the sub-component by financing additional activities, including:

[22] In 2015, the International Finance Corporation (IFC) estimated that a refrigerated warehouse capacity could service only 6 percent of produced fruits and vegetables. Although increased in recent years (during 2015-2019, 188 new storage facilities were constructed with a total capacity of 224,000 tons), the refrigerated warehouse capacity in Tajikistan in 2018 was only 0.1 million m^3 or 0.041 m^3 per urban resident, according to the Global Cold Chain Alliance's 2018 Global Cold Chain Capacity Report. In Uzbekistan, for comparison, it was 0.385 m^3 per urban resident in 2018, increasing from 0.102 m^3 per urban resident in 2014.

(i) developing an early warning system for livestock, including to prepare for hydrometeorological and temperature extreme events and animal diseases. The SRASP AF will finance the recruitment of a consultant who would assist the government in the development of the early warning system for livestock; the procurement of goods e.g., mobile agrometeorological stations, capacity building of staff of the MOA; and operating costs incurred in the process of establishing the system;

(ii) strengthening national participation in regional and global early warning systems for hydro-meteorological events. The SRASP AF will finance the participation of personnel in national and international workshops, symposia, seminar etc., and operating costs incurred while participating in the events;

(iii) developing market and agriculture inputs price information systems, including the scaling up of digital technologies and information platforms. The SRASP AF will finance the recruitment of consultants that would help the government in the development of the system, procurement of IT equipment and software, and capacity building of staff of the MOA, and operating costs incurred in the process of establishing the system;

(iv) complementing ongoing efforts led by FAO, UNICEF, and WFP to introduce the IPC methodology in the country as an innovative multi-stakeholder initiative to improve analysis and decision-making on food security and nutrition. The SRASP AF will finance periodic surveys, report writing, dissemination etc. and operating costs incurred in conducing the surveys, producing reports (report writing), and dissemination; and

(v) supporting the government in implementation of the FSCPP through possible follow-up capacity building support e.g., training, exchange visits, etc., based on the identified needs under the FSCPP and operating costs.

(b) Addition of *Sub-component 3.4: Nutrition improvement (US$5.0 million)*. The proposed SRASP AF will provide financial resources to set-up a new sub-component that will aim to improve national nutritional outcomes by focusing on immediate nutrition needs, specifically:

(i) The SRASP AF will finance the procurement and distribution of micronutrients and vitamin supplements for pregnant and lactating women and children (6-59 months), and RUTFs for children at risk of SAM. The micronutrient and vitamin supplements for pregnant and lactating women and children, and the RUTFs for children at the risk of SAM will be procured by the project, in collaboration with the Ministry of Health and Social Protection (MOHSP) and relevant UN agencies e.g., WFP and UNICEF and will be distributed through the Clinical Research Institute for Pediatrics and Pediatric Surgery under the MOHSP to the primary healthcare facilities. The MOA, through the AED PMU, will sign a Memorandum of Understating (MOU) with Clinical Research Institute for Pediatrics and Pediatric Surgery under the MOHSP The SRASP AF will also finance the recruitment of a third party who would monitor the distribution of seeds, seedlings, and planting materials; micronutrients; vitamin supplements; and RUTFs. The SRASP AF will also finance media and communication campaign aimed at raising awareness on the importance of healthy and diverse diets and of micronutrients intake; consequences of micronutrient deficiencies; good IYCF practices; and other critical nutrition messages;

(ii) The SRASP AF will finance the recruitment of a Technical Assistance (TA), through the MOA, that will help the government in establishing the PRF, and the capitalization of the PRF. The PRF will assist wheat flour and edible salt companies in the procurement and supply of food fortification premixes (specifically, micronutrients and potassium iodate/iodine). The PRF will be established in collaboration and consultation with the Ministry of Industry and New Technologies (MINT), MOHSP, the National Scaling Up Nutrition (SUN) Coordination Council and other interested parties and hosted in a PRF implementing entity to be identified at a later stage as part of the TA. The PRF implementing entity, once identified will undergo fiduciary assessment in a manner satisfactory to the Association. The SRASP AF will also finance capacity building of the PRF implementing entity with an aim to enhance its capacity to manage and run the PRF. The SRASP AF will also join other DPs, such as UNICEF, in supporting advocacy work for including the micronutrient premix and potassium iodate/iodine in the essential drugs list and/or for exempting procurement of premix and potassium iodate/iodine from customs fees and taxes;

(iii) The SRASP AF will finance implementation of priority nutrition-sensitive agriculture interventions specified under the Multi-Sectoral Nutrition Action Plan (MSNAP) (2021-2025) for which the MOA is responsible. The SRASP AF will finance human resource capacity development of the MOA e.g., training, exchange visits, conference participation etc., to be able to mainstream nutrition considerations in policies, strategies and programs, including in the Republic of Tajikistan Food Security Program and render it capable to participate and report on the activities it is responsible for in global and national nutrition fora, including the National SUN Coordination Council Meetings, including reporting on dietary diversity under the Food Security Program. Additionally, the SRASP AF will finance MOA's effort to integrate into its agriculture extension and advisory services delivery of nutrition messages (extension materials e.g., leaflets, brochures, posters, etc., production and distribution), such as the promotion of production and consumption of locally available folate-rich foods (such as dark leafy green vegetables, pulses, nuts and seeds, and citrus fruits). The SRASP AF will also finance demonstration of nutrition sensitive agricultural activities and the development and dissemination of nutrition-sensitive agriculture training and information, education, and communication (IEC) materials that will enable the training of MOA staff at national, province and district levels, including "Training of Trainers" who can then lead demonstrations in the field on for example diversified homestead gardening, and small livestock production. Lastly, the SRASP AF will finance knowledge generation and exchange events on nutrition-agriculture programming and organization and participation in national and international nutrition platforms to showcase the results and progress on nutrition-sensitive activities implemented by the MOA.

29. Under ***Component 4: Project management and coordination*** *(US$1.0 million).* The objectives and structure of the component will remain the same. The proposed SRASP AF will increase the amount of financial resources allocated to project coordination and management, including incremental staffing e.g., hiring a health/ nutrition specialist, and operating costs to enhance project implementation, coordination, and result monitoring; ensure fiduciary and safeguards compliance, and improve grievance redress and citizen engagement.

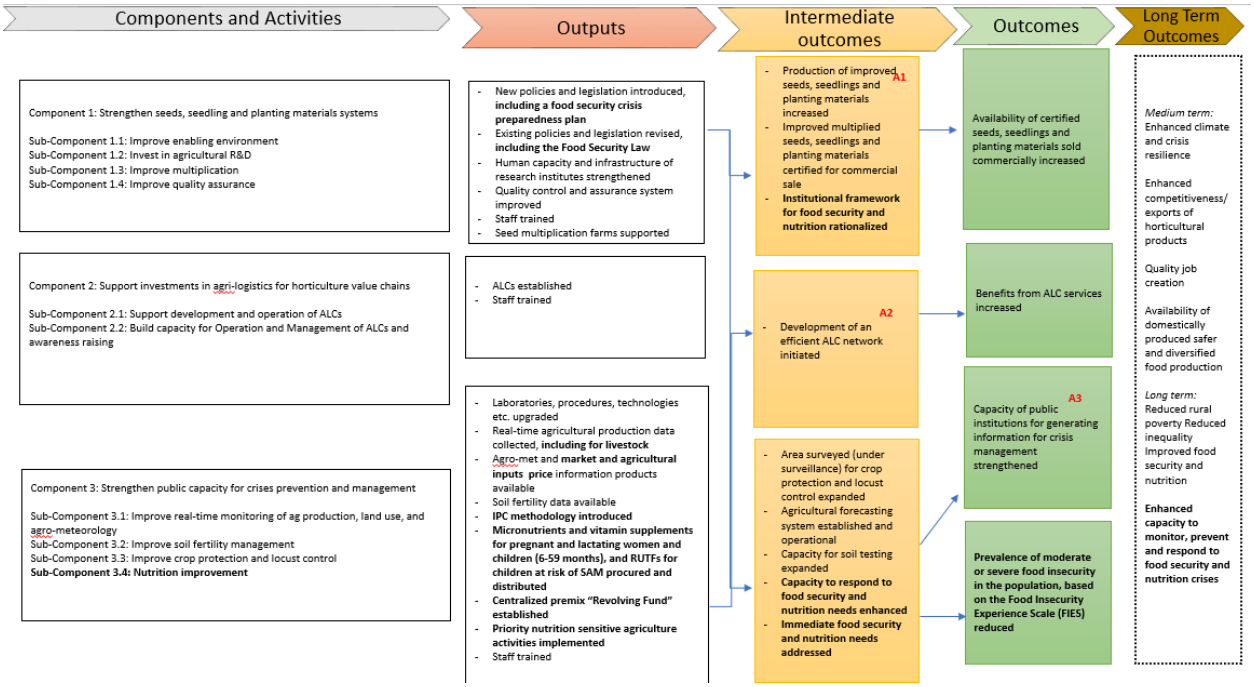
30. A summary of costs and financing by component of the proposed SRASP AF is provided below (Table 1).

Table 1. Summary of the SRASP and SRASP AF financing by component (in US$ million)

Component	SRASP	SRASP AF	Total
Component 1	27.7	25.70	53.40
Component 2	14.0	11.0	25.0
Component 3	13.3	12.3	25.6
Component 4	3.0	1.0	4.0
Total	**58.0**	**50.0**	**108.0**

31. The revised Theory of Change (Figure 1) incorporates the expected outputs and outcomes as well as long term benefits to be supported by the SRASP AF.

Figure 1. Revised Theory of Change



Notes:
(1) Critical assumptions A1: Sufficient quantity of super elite and elite material is imported. A2: Clients are using ALCs. A3: System needs to meet characteristics of accuracy, completeness, consistency, timeliness, and/ or validity.
(2) In normal font: Parent project; In bold font: Additional Financing

32. **Institutional and implementation arrangements.** The institutional and implementation arrangements of the SRASP will be revised to reflect changes that are brought about by the SRASP AF. The membership of the PSC and PTC established during the SRASP will be revised (expanded) to include representatives of the MOHSP and MINT. The staffing of the project implementation unit (AED PMU) will be

revised to include a Health/ Nutrition Specialist. A PRF with clearly defined governance structure and standard of operations will be established and housed in a PRF implementing entity to be identified at a later stage as part of the TA. The details of how the PRF will operate will be spelled out in a PRF Operations Manual to be prepared at a later stage as part of the TA, and in a manner acceptable to the Association. The adoption of the PRF Operations Manual, along with the satisfactory establishment of the PRF implementing entity will be a condition for disbursement of Grant proceeds to capitalize the PRF. The primary implementing agency for the proposed SRASP AF project will continue to be the MOA, while the PRF will be implemented by an PRF implementing entity to be identified at a later stage as part of the TA. FAO will continue to support the implementation of the proposed SRASP AF including Sub-components 3.1 and 3.4 as it possesses internationally acclaimed expertise in food security and nutrition improvement. Just as in the parent project, the MOA will be supported by international and/or national consultancy services and TA in the implementation of project activities to be financed under the proposed SRASP AF.

33. **POM.** The SRASP's POM will be amended to reflect changes introduced because of the proposed SRASP AF. A separate RF Operations Manual will be prepared to support the implementation of activities identified under the PRF. The amended POM will be subject to the World Bank's review and no objection to be provided before project effectiveness, whereas the adoption of a PRF Operations Manual, which has to also be satisfactory to the World Bank, will be a condition to disburse Grant funds to (capitalization of) the PRF.

B. Alignment with CPF

34. The proposed SRASP AF project activities align with key government strategies and plans, such as "An action plan for mitigation/prevention of the potential impacts and risks to the national economy" (also referred to as the Anti-Crisis Action Plan).[23] The Plan includes amongst others several measures focused on addressing food and nutrition security, through for example: increasing domestic production and storage facilities of key products; ensuring the availability and price stability of staple food products; and allocating additional funds from all available financial sources to provide dehkan (smallholder) farmers and the population with key agricultural inputs (seeds and fertilizers). The AF will also support implementation of the National Development Strategy 2030 (and specifically Strategic Development Objective 3. Food and nutrition security and people's access to good quality nutrition), MSNAP 2021-2025, Behavioral Change Communication Strategy on the First 1000 days, and the national law on fortification of food products. The proposed SRASP AF is also aligned with the parent SRASP objectives as well as the WBG's overall engagement with the Government of Tajikistan, as laid out in the Country Partnership Framework for the period FY19–FY23 (CPF). Specifically, *Objective 2. Enhancing Health Services* under Focus Area *Investing in human capital and building social resilience*; and *Objective 6: Improving the Business Environment and Facilitating Exports Sustainably* and *Objective 7. Strategic Public Infrastructure Reform with Potential to Crowd in Private Activities* under Focus Area *Enabling private-sector growth and creating markets.* Proposed SRASP AF project activities are also in line with the WBG's twin goals of ending extreme poverty and promoting shared prosperity in a sustainable manner, as elaborated in the Systematic Country Diagnostic (SCD). The SRASP AF is also consistent with Pillars 1, 3 and 4 of the GCRF. Lastly, the proposed SRASP AF follows the four themes identified in the Impacts of the War in Ukraine on Food and Nutrition Security World Bank Response Guidance Note (June 25, 2022), as likely for countries to prioritize when coping with short-run negative aspects of the crisis and building improved, longer-run resilience -

[23] Government of Tajikistan Resolution #116, March 18, 2022.

specifically, the themes on Support production and producers, Facilitate increased trade in food and agricultural inputs, Support Vulnerable households, and Invest in sustainable food and nutrition security.

C. Changes to the Results Framework

35. **The Results Framework** (RF) of the SRASP will undergo revisions to reflect the changes brought about due to additional resources received, including scale-up of activities, and addition of the new sub-component and associated activities. One additional PDO indicator will be added to capture the new dimensions of the proposed PDO, specifically Prevalence of moderate or severe food insecurity in the population (disaggregated by gender, using FIES[24]), and new IRIs will be added to monitor achievements of the emergency operations, including the procurement and distribution of of seeds, fertlizers, small farm machinery; micronutrient and vitamin supplements; and RUTFs (disaggregated for: vulnerable rural households, pregnant and lactating women[25], and children[26] (6-59 months), the establishment of the PRF (food fortification), and implementation of NSA activities. Targets for the SRASP PDO indicators and IRIs will be scaled up and revised to reflect higher values for indicators linked to activities that will receive additional resources and established for the indicators measuring new activities.

III. KEY RISKS

36. Key risks identified under the SRASP, and their ratings are updated to reflect the risks for achieving the PDO given the SRASP AF. They will be reassessed and adjusted if needed during implementation. At appraisal, the overall residual project risk is assessed as Moderate, with the following key risks.

(a) **Political and governance.** Moderate. This emanates from implementing project financed activities in an environment characterized by low levels of transparency, accountability, and participation; as well as the limited recourse to anti-corruption and fiduciary regulations, which exist but are not fully enforced. Mitigation measures will include recruiting, retaining, and training existing but also additional AED PMU staff at the central (Dushanbe) and regional (Oblasts) levels that will assume responsibility for supporting the implementation of project supported activities as a whole and thus help to address potential political and governance challenges. The AED PMU will be supported by the PSC and PTC that have already been established and operational with expanded membership to include new stakeholders that will participate in the implementation of the project, and by the international TA that has already been contracted to support the government in project implementation, including to further enhance mechanisms for transparent planning, implementation and monitoring and supervision of the project financed activities. The revised POM, GRM, Citizen Engagement will continue

[24] Food Insecurity Experience Scale (FIES) is an experience-based measure (indicator) of household or individual food security. For more information, please see https://www.fao.org/in-action/voices-of-the-hungry/fies/en/
[25] These include women that have any type of anemia who have received iron-folic acid supplements as per the national guidelines (disaggregated by pregnant and lactating women).
[26] These include children 6-59 months who have any type of anemia who have received iron-folic acid supplements micronutrient supplements (disaggregated by gender), and children who are at the risk of severe acute malnutrition (SUM) who have received ready-to-use therapeutic food.

to be used to mitigate risks associated with governance. A third-party monitoring mechanism that will allow Civil Society Organizations' active participation/ involvement in project implementation will also be established to improve transparency, reduce reliance on government, help build beneficiary capacity, ensure beneficiary selection, and beneficiary capacity building. The World Bank will provide close supervision to ensure compliance with World Bank fiduciary requirements and anti-corruption guidelines.

(b) **Macroeconomic.** Moderate. The macroeconomic risk is assessed as Moderate. Tajikistan is a low-income country the economy of which is largely agrarian and highly dependent on remittances from migrants. Remittances are largely used to finance the purchase of agricultural inputs, including seeds, fertilizer, machinery, and food. The COVID-19 pandemic wiped out the income and poverty reduction gains achieved over the past couple of years thereby amplifying economic risks. This was exacerbated by the war in Ukraine, which had led to higher food, fertilizer, and energy prices and decline in remittance incomes leading to food insecurity in Tajikistan, which is especially severe for vulnerable rural households, whose livelihoods heavily depend on remittance incomes. To mitigate some of the macroeconomic risks, the project will invest in the procurement and distribution to farmers and vulnerable groups of seeds, fertilizers, and small farm machinery. The project will also invest in the procurement and distribution of micronutrient and vitamin supplements to women (lactating and pregnant) and children 6-59 months that have any type of anemia; and therapeutic foods for children who are at the risk of SAM. The parent project and SRASP AF will also invest in public goods that will enhance the resilience of the agricultural sector as well as respond to future crises.

(c) **Institutional Capacity for Implementation and Sustainability.** Moderate. Institutional capacity for implementation and sustainability's risk is assessed as Moderate because public institutions to be supported by the parent project were severely underfinanced in the past, which significantly weakened their capacity and capability. Some of the project supported institutions will require new knowledge and skills e.g., MOA. MINT, FSC. The risk is amplified by reliance on donors to finance many food and nutrition related activities as well as agricultural public goods. The risk will be mitigated by: (i) building on the strong ownership of the MOA; (ii) strengthening the linkage and coordination between the MOA, MOHSP, and MINT; (iii) continuing the dialogue with the Ministry of Finance on increasing public expenditures on agriculture, food and nutrition over the medium run; (iv) making a thorough preparation of investments under the parent project; (v) allocating sufficient budget under the project for attracting global experts to strengthen knowledge and skills of the staff of public institutions; and (vi) partnering with FAO, WFP, UNICEF and other donors to support food and nutrition security, and more resilient and sustainable agriculture sector.

(d) **Environmental and Social risks.** The overall environmental and social risk is assessed as Substantial due to high country ESF risks and the country-wide nature of the project, which is more difficult to manage than location-specific activities. The project will finance the construction of medium sized ALCs that might cause direct environmental and health risks such as increased environmental pollution with waste, noise, dust, emissions and discharges, as well as health hazards and labor safety issues due to civil works. These risks and impacts are expected to be typical for construction and rehabilitation

works, temporary by nature and localized, and can be readily mitigated through the development and proper implementation of site-specific ESMPs. Component 1 will involve the potential for pesticide use but that use is expected to be well defined and mitigable with project's Pest Management Plan (PMP). Social risks include exclusion to be addressed to a large extent through an updated SIP and an updated SEP supplemented with an effective IEC campaign.

(e) **Other risks.** Moderate. The other, COVID-related risk is rated as Moderate. The COVID-19 situation still prevails as elsewhere, and it may even escalate quickly with some smaller hotspots. This uncertainty could delay project disbursement, including due to the reluctance of international consultants to be recruited by the project to travel to Tajikistan. The COVID-19 situation will, however, be continuously and closely monitored to assess its impact on project implementation. The project will plan and conduct various public activities and consultations to consider the risk of potential subsequent waves of disease and design mitigation measures.

IV. APPRAISAL SUMMARY

A. Economic and Financial Analysis

37. The AF Economic and Financial Analysis (EFA) was conducted based on the SRASP EFA confirming the validity of the assumptions and calculations used at the design. Acknowledging the demand driven nature of the parent project, the original EFA was carried out using eight illustrative crop models quantifying the benefits deriving from the improved access to better planting materials, production techniques and improved resilience to external shocks, and improved agri-logistic services supported by the project on national level. The results of the analysis were then extrapolated to the whole project in order to identify the overall project's economic impact.

38. Based on the description of additional activities to be implemented using the SRASP AF funds, the EFA identified a range of new assumptions to be adopted and associated additional quantifiable benefits to be reflected in the revised analysis. Mainly these assumptions are associated with (i) inputs and small-scale farm machinery to be distributed for beneficiaries under Subcomponent 1.3 as an emergency intervention, which would cover about 13,500 ha of additional cropland and 20,000 units of small farm machinery; and (ii) two additional ALCs to be established under Subcomponent 2.1 using the same design and parameters as the three originally planned ALCs under the SRASP. The analysis has made an attempt to quantify the benefits under the newly added Sub-component 3.4, however did not add it to the overall economic analysis as the potential benefits are beyond the horizon of 20 years. The SRASP AF EFA resulted in EIRR of 14.4 percent and ENPV of US$158.5 million, which proves its economic viability. Table 2 below demonstrates the sensitivity of the EFA to potential changes in benefits, costs, and delays in implementation (see Annex 1 for more details).

Table 2. Sensitivity analysis against potential changes in benefits, costs, and implementation delays

Sensitivity Analysis (20-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 30%	1 year	2 years
EIRR	**14.4%**	13.6%	12.9%	11.0%	15.2%	15.9%	13.5%	12.5%	11.6%	13.0%	11.6%
ENPV (US$ million)	**158.5**	149.3	140.1	112.5	183.5	208.6	133.4	108.4	84.8	128.0	99.3

B. Technical

39. The technical design of the proposed SRASP AF reflects the need for responding for the emergency food and nutrition situation of the country, strengthening the resilience of the agriculture and food sector, increasing production and export competitiveness of the growing horticulture sector, as well as the needs for strengthening the public capacity to prepare for and respond to crises and for creating a stronger agriculture-nutrition alliance by tackling the country's immediate nutritional needs. The design is supported by international experience, lessons learned from implementing WB financed projects, including the recently closed Agriculture Commercialization Project (ACP), and projects currently under implementation, including Rural Economic Development Project (REDP), Tajikistan Emergency COVID-19 Project, and its three AFs, Tajikistan Social Protection Systems Modernization and Emergency Response Project, ECD Project for Building Tajikistan's Human Capital, and Tajikistan Health Services Improvement Project, and the under preparation Resilient and Sustainable Tajikistan Development Policy Operation, as well as consultations with research and academia, private sector, and DPs representatives in Tajikistan. Design of project activities under the development of resilient seeds, seedlings and planting materials systems follows the globally accepted value chain approach in identifying key challenges and constraints and addressing them effectively. The proposed SRASP AF also builds on experiences gained and lessons learned from projects that supported the sector by other DPs in Tajikistan, including SIDA, USAID, EU, GIZ, UNICEF, WFP, and FAO. The experience with developing the medium-size ALCs will generate lessons for future scale up of the initiative nation-wide. Design of activities under the public capacity for crises prevention and management is based on the need for boosting/strengthening MOA's and other relevant public institutions' capacity in early warning, preparedness, and response to shocks/crises like climate change, flooding, locust, food insecurity, and the COVID-19 global pandemic. Selected nutrition activities proposed under the proposed SRASP AF are those prioritized by the government following extensive stakeholder consultations and those proven to be the most cost-effective. Investing in nutrition is one of the most cost-effective public health interventions. The World Bank estimates that every dollar invested to reduce stunting can generate an US$18 return in the long run.[27]

Shadow price of carbon.

40. The SRASP AF stage GHG analysis has been conducted using the same working file as for the SRASP to capture the additional GHG emissions/sequestration resulted in SRASP AF funded activities implementation. It resulted in -45,666 tCO2-eq of mitigation per year at full development or -913,326 tCO2-eq for the total project

[27] World Bank, 2017. Childhood stunting in Tajikistan: quantifying the association with wash food security health and care practices. Available at http://documents.worldbank.org/curated/en/177891521471973553/Childhood-stunting-in-Tajikistan-quantifying-the-association-with-wash-food-security-health-and-care-practices
https://nutrition.org/economists-making-case-stunting-reduction/

lifetime (see Annex 1 for more details). Considering the estimated shadow price of carbon that will evolve from year to year according to the World Bank Shadow Price of Carbon Guidance Note, the EIRR and the ENPV were re-calculated. The results of scenarios with low carbon price (starting from US$41 and evolving over years), high carbon price (starting from US$82 and evolving over year) and without carbon are presented in Table 3 below.

Table 3. The EIRR and ENVP using different scenarios of the shadow price of carbon

	Without carbon benefits scenario	Low carbon price scenario	High carbon price scenario
ENPV (US$ million)	158.5	184.1	209.7
EIRR	14.4 percent	15.9 percent	17.5 percent

41. The low shadow price of carbon scenario has a potential to improve the EIRR from 14.4 percent to 15.9 percent, while the high shadow price of carbon scenario will improve the EIRR up to 17.5 percent.

42. Climate co-benefits. Climate change mitigation and adaptation objectives under the SRASP will be retained and amplified by the SRASP AF. Table 4 below shows how the project will contribute to specific actions.

Table 4. Summary of project climate co-benefits per activity

Activity	Adaptation	Mitigation
Sub-component 1.1: Enabling environment		
Review of policies, legislation and institutional arrangements[28] **(F=US$0.35 million)**	Increased awareness and information dissemination on how climate change can affect food availability and nutrition outcomes, including access, utilization, and the stability of each of these over time (all four being key dimensions of food security) and how to adapt. to climate change impacts on the agriculture, livestock, and food sector for government at all administrative levels.	
Sub-component 1.3: Multiplication of seeds, seedlings, and planting materials		
Procure and distribute emergency seeds, seedlings, planting materials and fertilizers to farmers and vulnerable rural households **(F= US$20.0 million)**	All seeds, seedlings and planting materials will be climate-and pest-resilient and aligned with agro-ecological zone.	All resources will support beneficiaries of seeds and fertilizers to apply improved agronomic practices, including efficient use of seeds and fertilizers.
Procure and distribute small agricultural machinery to simplify women's manual labor; **(F= US$4.5 million)**	Farm machinery will be climate smart and aligned with agro-ecological conditions.	Improvement of energy efficiency will be mainstreamed as a target for all farm machinery procured.
Provide training for seed multiplication, seedlings and	All resources will support farmers and institutions	All resources will support farmers and institutions (extension

[28] This activity captures both adaptation and mitigation

Activity	Adaptation	Mitigation
planting material and the use of small innovative equipment to vulnerable farmers. **(F = US$0.5 million)**	(extension providers) in the development, adaptation and adoption of climate smart practices and technologies. For example, in the area of adaptation: • technologies will be adapted to local environmental conditions and to changing circumstances over time (e.g., co-evolution of pests and diseases, degradation of water and land resources and climate change manifestations).	providers) in the development, adaptation and adoption of climate smart practices and technologies. For example, in the area of mitigation: • training will be provided on energy efficiency and renewable energy production, as well as improved practices, to reduce GHG emissions.
Sub-component 2.1: Support the establishment and operation of ALCs		
Establish and operationalize two additional ALCs. **(F = US$11.0 million)**	Energy-efficient storage, processing, transportation, and refrigeration equipment, and more generally the improvement of access to logistical infrastructure is an important adaptation strategy.	Improvement of energy efficiency and production of renewable energy will be mainstreamed as a target for all in civil works and equipment purchase. Food loss and waste will be reduced through ALCs' streamlined processing platforms, including improved and new storage facilities which will reduce the risk of losses due to climate and increase resilience. Eventual access to markets is an essential driver for investments in efficiency gains, which in turn contribute to emission intensity reduction.
Sub-component 3.1: Real-time monitoring of agricultural production, land use, and agrometeorology		
Develop an early warning system for livestock, including to prepare for hydro-meteorological and temperature extreme events and animal diseases; and strengthen national participation in regional and	Functioning early warning systems are key to monitoring impacts of climate change on agriculture and livestock sectors and developing short term as well as longer term adaptation and resilience strategies.	Energy efficiency consideration will be incorporated in equipment purchase.

global early warning systems for hydro-meteorological events. **(F = US$0.5 million)**	The systems will be used to inform policy development and agricultural advisory and extension work.	
Improve market and agriculture inputs price information systems, including the scaling up of digital technologies and information platforms. **(F= US$0.5million)**		Energy efficiency consideration will be incorporated in equipment purchase.
Supporting the government in implementation of the FSCPP through possible follow-up capacity building support e.g., training, exchange visits, etc., based on the identified needs under the FSCPP **(F = US$0.25million)**	Mainstream climate change considerations in the FSCPP. A functioning FSCPP will help monitor food security related crises, including the impact of climate change, and to inform the development of climate sensitive short term and long-term food security and nutrition policies, strategies, and programs.	Knowledge and skill of authorities and staff of public institutions who are involved in the development of FSCPP will be increased to better mainstream climate change considerations, including in the formulation of policies, strategies, and programs.
Sub-component 3.4: Nutrition improvement		
Create a centralized supply for food fortification premixes by establishing a "revolving fund" **(F= US1.50 million)**	Climate change awareness raising among operating salt producers and wheat flour milling companies.	Knowledge and social corporate responsibility of operating wheat milling companies and salt producers who will be buying premix from the revolving fund will be increased on climate change. The project will discuss the emissions caused by the process of producing fortified wheat flour and edible iodized salt and support producers to develop a mitigation plan.
Procure and distribute micronutrients and vitamin (iron and folic acid) supplements for pregnant and lactating women and children (6-59 months) and therapeutic food for children at risk of SAM. **(F = US$2.0million)**	Media and communication campaigns on critical climate sensitive nutrition messages such as providing advice on dietary diversity, including growing and eating nutrition dense foods.	
Implement priority nutrition-sensitive agriculture interventions specified under the Multi-Sectoral Nutrition Action Plan (MSNAP)	Mainstream climate change considerations in policies and programs. For example, in the area of adaptation:	Mainstream climate change considerations in policies and programs. For example, in the area of mitigation:

(F = US$1.5million)	• climate smart agriculture (CSA) modules to be introduced alongside nutrition in agriculture extension and advisory services.	• climate smart agriculture (CSA) modules to be introduced alongside nutrition in agriculture extension and advisory services. • IEC material to raise awareness about diet-appropriate nutrition, food preparation practices and climate resilient practices, such as practices to minimize consumer food waste, including meal planning, and food storage and preservation (pickling, freezing, canning, or dehydrating). Topics will include awareness raising on low-carbon diets.

43. The RF of the proposed SRASAP AF will retain the two climate indicators to track and monitor progress of interventions that contribute towards reducing vulnerability to climate change impacts, specifically IRIs "Production of seeds, seedlings, and planting materials increased" and "Agricultural forecasting system established and operational".

44. **Gender.** The proposed SRASP AF will retain the parent project's focus on closing the gender gap related to access of market, and information and services related to agri-logistics, such as sorting, cooling, storage, and packaging.[29] In addition, the SRASP AF will finance the purchase and distribution of small agricultural machinery to simplify women's manual labor (Sub-component 1.3). Furthermore, all proposed nutrition-specific and nutrition-sensitive interventions under Sub-component 3.4. will specifically target pregnant and lactating women. The proposed SRASP AF will retain the parent project's results indicators related to gender, specifically PDO level indicator Female clients benefiting from ALC services for at least one year; it will continue to disaggregate other indicators for gender (specifically Clients satisfied with the quality of services provided by ALCs, and Clients who report that the two-way channel for feedback and response works), and it will also introduce a gender-specific indicator to monitor activities related to Sub-component 3.4, specifically Number of women who have received iron-folic acid supplements as per the national guidelines (disaggregated for pregnant and lactating women), Number of children 6-59 months old who have received micronutrient supplements (disaggregated by gender), and Number of children at risk of SAM who have received RUTFs (disaggregated by gender). Investments in nutrition will alleviate the burden of preventable malnutrition, morbidity, and mortality. In addition to directly benefitting women, these investments will further interrupt the intergenerational transmission of poor health endowments and nutrition status from mother to child that manifests in the high burden of stunting.

[29] For more details, see SRASP PAD paragraph 73.

45. **Nutrition.** The proposed SRASP AF will continue to focus on a nutrition smart agriculture[30] activity through its focus on the horticulture value chain under Component 2, but it will also expand to include activities aimed to improve nutritional outcomes through the health and agriculture sectors and the food industry (mainly wheat flour and edible salt producers) under Sub-component 3.4. Activities will support food fortification, procurement, and distribution of micronutrient supplements to pregnant and lactating women and young children, and of RUTF for children at risk of severe acute malnutrition. Additionally, the proposed SRASP AF will support prioritized nutrition-sensitive agriculture activities, such as mainstreaming of nutrition in MOA policy and program planning and implementation, integrating nutrition awareness messaging in agriculture extension services, and field demonstration of nutrition-enhancing agriculture activities. These interventions will be accompanied by MOHSP efforts in providing nutrition counseling at primary health care facilities. Lastly, the SRASP AF will also support a media and communication campaign on the importance of healthy and diverse diets and of micronutrients intake; consequences of micronutrient deficiencies; good IYCF practices; and other critical nutrition messages.

46. **Maximizing Finance for Development (MFD)/ Private Capital Mobilization (PCM).** The SRASP had considered the MFD approach.[31] The proposed SRASP AF continues to include a spectrum of actions with the potential to increase the space for private sector activity, such as (i) improving the policy and regulatory environment; (ii) supporting essential public goods and services such as strengthening human capital, agricultural services, and public infrastructure (ALCs) contributing to enhance market access; (iii) directly building the capacity of private sector seed producers and nurseries in the multiplication of seed, seedlings and planting material; and (iv) improving early warning systems and thus empowering public and private sector actors alike to take timely and informed production and other market decisions. Moreover, the establishment of a "revolving fund" under Sub-component 3.4 will catalyze the process of engaging private companies to fortify food products.

47. **Citizen engagement (CE).** The proposed SRASP AF will continue to support CE through the SRASP mechanisms, specifically: (i) the use of feedback generated through intermediate and outcome results indicators that measure client satisfaction with services provided under the project; and (ii) the grievance redress mechanism (GRM).[32] Experience with the above mechanisms since project implementation has so far focused on consultations with the seed farms (under Sub-component 1.3) to identify investment areas and the results of those consultations were incorporated in the FY23 AWP&B.

48. **Financial Management (FM).** The FM arrangements of the SRASP remain Satisfactory and will be replicated for the proposed SRASP AF. There are no pending audits under the parent project. The AED PMU has just installed the 1C accounting software. MOA through the AED PMU will prepare and submit quarterly interim unaudited financial reports (IFR) within 45 days after the end of each quarter. Each audit of the Project financial statements shall cover the period of one fiscal year of the Recipient, commencing with the fiscal year in which the first withdrawal was made. The audited Financial Statements for each such period shall be

[30] Nutrition Smart Agriculture: When Good Nutrition is Good Business https://www.worldbank.org/en/topic/agriculture/publication/nutrition-smart-agriculture-when-good-nutrition-is-good-business

[31] For more details, see SRASP PAD paragraph 74.

[32] For more details, see SRASP PAD paragraph 75.

furnished to the WB/Association not later than six (6) months after the end of such period and made publicly available in a timely fashion and in a manner acceptable to the WB/Association. Disbursements from the financing grant account will be made in accordance with the Disbursement Guidelines for IPF (dated May 2017) and will use the following disbursement methods: direct payment, special commitments, reimbursement. Advance to a Designated Account will be added as a method after the portfolio lapsed loans issue is resolved.

49. **Procurement Management.** The procurement arrangements established for the SRASP are Satisfactory and will be replicated for the proposed SRASP AF. Procurement activities envisaged for the SRASP AF are similar to those of the parent project with the new ones related to the food and nutrition aspect of the SRASP AF. The PPSD, including PP, for the SRASP has been updated by the implementing agency to reflect the proposed SRASP AF interventions and the updated PPSD was discussed and agreed during negotiations held on November 29, 2022. Based on procurement performance of the parent project, procurement risk for the SRASP AF is currently rated Moderate. Additional risks for the SRASP AF, including those for the new activities, along with the proposed mitigation measures, will be further assessed and presented in detail in the updated PPSD.

Legal Operational Policies

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

50. This policy was triggered for the SRASP because the project is supporting the rehabilitation of existing irrigation schemes that draw water from two cross boarder rivers. Activities under the additional financing also include the rehabilitation of existing irrigation schemes and minor (emergency-type) rehabilitation also of off-farm and on-farm irrigation infrastructure for a new group of beneficiaries. The activities (i) will not adversely impact the quantity or quality of water in the international waterways, and (ii) will not be adversely affected by the other riparians' possible water use. Therefore, the SRASP and the Additional Financing fall within the exception to the notification requirements as set forth in paragraph 7(a) of OP 7.50. The approval of the exception to the notification requirement was approved by the RVP on March 21, 2021 for the SRASP and on November 30, 2022 for the Additional Financing.

Environmental and Social Risks Management.

51. The environmental and social risks of the proposed SRASP AF are both rated Substantial, making the overall E&S risk rating Substantial. The proposed SRASP AF recognizes the following Environmental and Social Standards as relevant: ESS 1 – Assessment and Management of Environmental and Social Risks and Impacts; ESS 2 – Labor and Working Conditions; ESS 3 – Resource Efficiency, and Pollution Prevention and Management; ESS 4 – Community Health and Safety; ESS 5 – Land Acquisition, Restriction on Land Use and Involuntary Resettlement; ESS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources; and ESS 10 – Stakeholder Engagement and Information Disclosure.

52. The proposed SRASP AF is expected to result in overall positive impacts as the interventions will improve livelihoods and local knowledge and enhance food and nutrition security. Adverse environmental and social impacts, if any, and the risks therefrom, are expected to be limited in duration and mitigable. Planned project interventions planned under Component 1 involve the potential for pesticide use, which is expected to be well defined and mitigable with properly prepared and implemented pest management plans. There are potential works under Component 2 that are related to the construction of ALCs. Works-related risks are likely to occur during the construction phase (occupational health and safety hazards, generation of solid waste, air pollution and noise, disruption of traffic, etc.) and are easily managed and mitigated.

53. The proposed SRASP AF is taking a framework approach because the details about the ALCs and the design features of small-scale irrigation schemes to be reagitated and their exact locations are not known. The following ESS instruments cleared by the Bank for the parent Project are relevant to the AF activities, including: (i) ESMF; (ii) RPF; (iii) LMP and (iv) CLMP. These instruments have been consulted up and disclosed in country and on the World Bank external website on May 4, 2021. The SEP and SIP will be revised to reflect changes brought about by the AF, consulted upon and disclosed in country and on the World Bank external website before effectiveness date. The AED PMU will be responsible for updating and implementing the ESS instruments.

54. The ESMF assesses current pest management practices and recommends areas for improvement; provides guidelines for assessing project activities; and, where necessary, preparing and implementing the mitigation measures to be incorporated in the site-specific Environmental and Social Impact Assessments/Environmental and Social Management Plans and Checklists (ESIA/ESMPs/ESMP Checklists). The RPF likewise indicates when site specific Resettlement Action Plans (RAPs) would be required. LMP outlines the type of project workers, labor conditions and associated labor risks, as well as mitigation measures. The CLMP includes specific commitments and responsibilities for monitoring and addressing the child labor issues, as well as describes approaches and methodology towards child labor monitoring relevant to the AF project activities. The updated SEP outlines the activities and responsibilities for continuous information-sharing and inclusive engagement and processing of feedback from project-affected and other interested parties, including rural population in the target areas under AF activities. The updated SIP, which incorporates new project stakeholders and the ways to engage them in the project implementation will be consulted upon and disclosed in country and on World bank's external website before effectiveness date. The risk of social exclusion will be addressed to a large extent through the updated SIP supplemented with an effective IEC campaign. The updated and negotiated ESCP sets out the activities to be carried out during project implementation and could be adjusted during the project cycle in line with the evolution of environmental and social risks and impacts under the AF.

V. WORLD BANK GRIEVANCE REDRESS

55. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank'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 Bank's independent Accountability Mechanism (AM). The AM houses the

Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Project's Development Objectives	✓	
Results Framework	✓	
Components and Cost	✓	
Implementing Agency		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Legal Covenants		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Other Change(s)		✓

VII DETAILED CHANGE(S)

PROJECT DEVELOPMENT OBJECTIVE

Current PDO

The development objective of the project is to strengthen the foundations for a more resilient agricultural sector in Tajikistan.

Proposed New PDO

To strengthen the foundations for a more resilient agricultural sector and support emergency interventions to address food and nutrition security in Tajikistan

COMPONENTS

Current Component Name	Current Cost (US$, millions)	Action	Proposed Component Name	Proposed Cost (US$, millions)
Strengthening seed, seedling and planting material systems	27.70	Revised	Strengthening seed, seedling and planting material systems	53.40
Support investments in Agri-Logistical Centers (ALCs) for horticulture value chains	14.00	Revised	Support investments in Agri-Logistical Centers (ALCs) for horticulture value chains	25.00
Strengthen public capacity for crises prevention and management	13.30	Revised	Strengthen public capacity for crises prevention and management	25.60
Project management and coordination	3.00	Revised	Project management and coordination	4.00
TOTAL	**58.00**			**108.00**

Expected Disbursements (in US$)

Fiscal Year	Annual	Cumulative
2021	0.00	0.00
2022	1,000,000.00	1,000,000.00
2023	25,000,000.00	26,000,000.00
2024	32,000,000.00	58,000,000.00
2025	26,000,000.00	84,000,000.00
2026	11,000,000.00	95,000,000.00
2027	13,000,000.00	108,000,000.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	Moderate	Moderate
Macroeconomic	Moderate	Moderate
Sector Strategies and Policies	Moderate	Moderate

Technical Design of Project or Program	Moderate	Moderate
Institutional Capacity for Implementation and Sustainability	Moderate	Moderate
Fiduciary	Moderate	Moderate
Environment and Social	Substantial	Substantial
Stakeholders	Moderate	Moderate
Other	Moderate	Moderate
Overall	Moderate	Moderate

LEGAL COVENANTS – Tajikistan Strengthening Resilience of the Agriculture Sector Project Additional Financing (P179851)

Sections and Description
The Recipient, through MoA, has adopted amendments to the POM in accordance with the terms and conditions of this Agreement and in a manner satisfactory to the Association. This is a effectiveness condition.
1Update, consult upon, adopt and implement Social Inclusion Plan (SIP) for the Project to ensure that poor and disadvantaged sections, especially women, are included in the Project activities. Due date: No later than 1 month after the Effective Date
Hire, as part of the Project Management Unit (AED PMU), a health and nutrition specialist under terms of reference satisfactory to the Association. Due date: Not later than forty-five (45) days from the Effective Date,
Appoint, and thereafter maintain throughout the Project implementation, a representative in the Gorno-Badakhshan Oblast, with adequate functions and responsibilities, all as further described in the POM and acceptable to the Association. Due date: Not later than three (3) months from Effective Date,

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient, through MoA, has adopted amendments to the POM in accordance with the terms and conditions of this Agreement and in a manner satisfactory to the Association
Type	Financing source	Description
Disbursement	IBRD/IDA	Under Category (3), unless and until the Recipient shall have adopted the PRF Operations Manual including, inter alia, the detailed implementation and fiduciary arrangements for the operation of the Revolving Fund Facility, including any relevant environmental and social aspects, in a form and substance acceptable to the Association, following the Association's satisfactory

		assessment of the capacity of the PRF Implementing Agency to undertake its implementation responsibilities under said Part of the Project.

VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Tajikistan

Tajikistan Strengthening Resilience of the Agriculture Sector Project Additional Financing

Project Development Objective(s)

To strengthen the foundations for a more resilient agricultural sector and support emergency interventions to address food and nutrition security in Tajikistan

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Strengthen the foundations for resilient agricultural sector				
Certified seeds, seedlings and planting materials sold commercially (Percentage)		0.00	40.00	75.00
Support investments in agri-logistics				
Clients benefiting from ALC services (Percentage)		0.00	15.00	30.00
Female clients benefiting from ALC services for at least one year (Percentage)		0.00	10.00	35.00
Strengthen public capacity for crisis management				
Database for timely and effective information for crisis management available (Yes/No)		No	Yes	Yes

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES). (Percentage)		30.00	25.00	20.00
Action: This indicator is New	***Rationale:*** ***The SRASP AF supports the procurement and distribution of micronutrients and vitamin supplements for pregnant and lactating women and children (6-59 months) and RUTFs for children at risk of severe acute malnutrition. It also supports the establishment of a "revolving fund" for the premix (specifically, micronutrients and potassium iodate/iodine) and provision of "seed funds for premix";*** ***and Implementation of priority nutrition-sensitive agriculture interventions specified under the Multi-Sectoral Nutrition Action Plan (MSNAP) (2021-2025) for which the MOA is responsible.***			

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Strengthen seed, seedling and planting material systems				
Production of improved seeds, seedlings and planting materials (Percentage)		0.00	30.00	60.00
Improved multiplied seeds, seedlings and planting materials certified for commercial sale (Percentage)		40.00	45.00	65.00
Number of seed multiplication farms supported by the project (Number)		0.00	23.00	50.00
Vulnerable rural households who benefitted from emergency improved seeds, fertilizer, and small farm machinery (Number)		0.00	234,000.00	345,000.00
Action: This indicator is New	***Rationale:***			

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
	Disruptions in agricultural input markets are a major source of vulnerability, i.e., price changes of agricultural inputs in global markets affect domestic producers and consumers due to an increase in the costs of agricultural inputs, particularly seeds and fertilizers thereby affecting food and nutrition security. The SRASP AF supports the procurement and distribution of seeds, fertilizers and small farm machineries to vulnerable rural households, including women			
Support investments in agro-logistical centers for horticulture value chains				
Number of ALCs fully operational (Number)		0.00	1.00	5.00
Action: This indicator has been Revised				
Clients satisfied with quality of services provided by ALCs (Percentage)		0.00	20.00	70.00
Clients who report that the two-way channel for feedback and response works (Percentage)		0.00	20.00	70.00
Strengthen public capacity for crises prevention and management				
Area surveyed (under surveillance) for crop protection and locust control (Percentage)		0.00	15.00	25.00
Agricultural forecasting system is established and operational (Yes/No)		No	No	Yes
Capacity for soil testing expanded (Number)		30.00	80.00	180.00
National agriculture strategies, policies, and/ or programs in which nutrition objectives and indicators are mainstreamed (Number)		0.00	1.00	3.00
Action: This indicator is New	***Rationale:*** ***The AF supports review of policies, strategies and programs with the view to mainstreaming food security and nutrition.***			

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Premix revolving fund established (Yes/No)		No	Yes	Yes
Action: This indicator is New	***Rationale:*** ***The AF will support the establishment of a "revolving fund" for supply for food fortification premixes, specifically, micronutrients and potassium iodate/iodine and provision of "seed funds for premix". Food fortification is expected to occur mainly in wheat flour and edible salt.***			
Women that have any type of anemia who have received iron-folic acid supplements as per the national guidelines (number) (Number)		0.00	174,799.00	352,946.00
Action: This indicator is New	***Rationale:*** ***This indicator measures achievements as a result of supporting emergency nutrition related activities, especially the procurement and distribution of micronutrients and vitamin supplements to pregnant women that have any type of anemia (disaggregated for pregnant and lactating wowmen) .***			
Children (5-69 months) that have any type of anemia who have received iron-folic acid supplements as per the national guidelines (Number)		0.00	2,500.00	6,250.00
Action: This indicator is New	***Rationale:*** ***This indicator measures achievements as a result of supporting emergency nutrition activities, especially the procurement and distribution of micronutrients and vitamin supplements to children (5-69 months) who have any type of anemia.***			
Children who are at risk of severe acute malnutrition (SAM) who have received ready-to-use therapeutic food (Number)		0.00	5,000.00	10,000.00
Action: This indicator is New	***Rationale:*** ***This indicator measures achievements as a result of supporting emergency nutrition activities, especially the procurement and distribution of RUTFs to children with severe acute malnutrition (SAM) (disaggregated by gender).***			

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Certified seeds, seedlings and planting materials sold commercially		Annual	Survey	Project survey	PIU
Clients benefiting from ALC services	ALC services could include sorting, cooling, storage, packing and logistics facilities. Clients include those farmers, agribusinesses etc. who use the ALCs as percentage of all farmers and agribusiness residing in the ALCs' catchment area to be identified through feasibility study.	Annual	ALC operating company	Project survey and data of ALC operating company	PIU
Female clients benefiting from ALC services for at least one year	ALC services could include sorting, cooling, storage, packing and logistics facilities. Female clients include those women farmers, women-owned or -managed agribusinesses etc. who use the ALCs as percentage of all farmers and agribusiness residing in the ALCs' catchment area.	Annual	ALC operating company	Project survey and data of ALC operating company	PIU

Database for timely and effective information for crisis management available		Bi-Annual	Report	Project report	PIU
Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).	The indicator will help assess experience of food insecurity (access) causing predictable reactions and responses that can be captured and quantified through a survey and summarized in a scale. Data collected and analyzed using the food insecurity prevalence indicator will help categorize households into four levels of household food insecurity (access): food-secure and mildly, moderately and severely food-insecure.	Once every two years.	Survey	House hold Survey (The questions contained in the Food Insecurity Access Scale (FIAS) were asked with a recall period of four weeks (30 days)	AED PMU

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Production of improved seeds, seedlings and planting materials		Annual	Research institutes, seed farms,	Report	PIU

			and other organizations		
Improved multiplied seeds, seedlings and planting materials certified for commercial sale		Annual	Ministry of Agriculture, Committee on Food Security	Report	PIU
Number of seed multiplication farms supported by the project		Annual	Ministry of Agriculture, Committee on Food Security	Report	PIU
Vulnerable rural households who benefitted from emergency improved seeds, fertilizer, and small farm machinery	This indicator measures achievements related to the procurement and distribution of emergency seeds, fertilizer, and small farm machinery for vulnerable rural families with an aim to address the short term need for these critical agricultural inputs (disaggregated by gender).	Annually	MOA and AED PMU	Report	MOA and AED PMU
Number of ALCs fully operational		Semi-Annual	ALC operating company	Report	PIU
Clients satisfied with quality of services provided by ALCs	Proposed Citizen Engagement indicator. ALC operational activities could include sorting, cooling, storage, and packing and	Midterm review; Endline	Survey	Independent impact evaluation	PIU

	logistics facilities. ALC "catchment area" will be identified through feasibility study. Clients include those farmers, agribusinesses etc. who use the ALCs. Clients will identify ALC services that are important to them, and will rate their satisfaction with identified service(s). Indicator will be disaggregated for gender.				
Clients who report that the two-way channel for feedback and response works		Annual	Report	Participatory social monitoring activities organized through regional PIU offices' social specialists	PIU
Area surveyed (under surveillance) for crop protection and locust control		Bi-annual	State organization for crop protection and chemicals, State expedition for locust control	Report	PIU

Agricultural forecasting system is established and operational		Annual	MoA	Report	PIU
Capacity for soil testing expanded		Annual	Research institute for soil fertility, TAAS, agrochemical laboratory of TAU, agrochemical stations	Report	PIU
National agriculture strategies, policies, and/ or programs in which nutrition objectives and indicators are mainstreamed	This indicator measures the outcome of review of the enabling environment of food and nutrition security, and ultimately the development of policies, regulations and/or programs in which food security and nutrition objectives and indicators are mainstreamed, including targets and monitoring mechanisms.	Annual	AED PMU Monitoring and progress reports	AED PMU Progress Reports	AED PMU
Premix revolving fund established	This indicator measures the establishment of a revolving fund facility for food fortification premixes, specifically, micronutrients and potassium iodate/iodine, The fund	Annually	AED Monitoring and Progress Reports	AED Reports	AED PMU

	provides “seed funds for the procurement of premix”, and will be managed in collaboration with the Ministry of Industry and New Technologies (MINT), Ministry of Health and Social Protection (MOHSP), the National Scaling Up Nutrition (SUN) Coordination Council and other interested parties.				
Women that have any type of anemia who have received iron-folic acid supplements as per the national guidelines (number)	This indicator monitors the number of lactating women that have any type of anemia who have received iron-folic acid supplements as per the national guidelines supported as a nutrition related activity of the SARSA AF	Quarterly	MOHSP and AED PMU	Report	MOHSP and AED PMU
Children (5-69 months) that have any type of anemia who have received iron-folic acid supplements as per the national guidelines	This indicator measures achievements as a result of supporting emergency nutrition activities, especially the procurement and distribution of micronutrients and vitamin supplements to children (5-69 months) who have any	Quarterly	MOHSP and AED PMU	Report	MOHSP and AED PMU

	type of anemia (disaggregated by gender)				
Children who are at risk of severe acute malnutrition (SAM) who have received ready-to-use therapeutic food	The indicator measures the number of children with severe acute malnutrition	Quarterly	Report	MOHSP and AED PMU	MOHSP and AED PMU

Annex 1: ECONOMIC AND FINANCIAL ANALYSIS AND GHG ACCOUNTING

Economic and Financial Analysis

1. The SRASP AF Economic and Financial Analysis (EFA) was conducted based on the SRASP EFA confirming the validity of the assumptions and calculations used at the design stage. Acknowledging the demand driven nature of the parent project, the original EFA was carried out using eight illustrative crop models quantifying the benefits deriving from the improved access to better planting materials, production techniques and improved resilience to external shocks, and improved agri-logistic services supported by the project on national level. The results of the analysis were then extrapolated to the whole project in order to identify the overall project's economic impact.

2. For the overall economic analysis, the SRASP EFA adopted the following two assumptions: 1) the overall yields of crops on national level was assumed conservatively to increase from current level by an average of 1.5 percent at a gradual rate due to improved seeds and seedlings (Component 1), whereas 2) the losses in overall agricultural output of crops is assumed to be avoided by 20 percent due to strengthening the early warning, preparedness and response capacity of selected public institutions involved in agricultural production (Component 3). Acknowledging the nation-wide targeting of the project, there was an additional assumption that the project's adoption rate would not exceed 70 percent. Moreover, the results of a separate cost-benefit analysis on three ALCs to be built in Khatlon, Sughd, and Dushanbe were added to the overall economic analysis.

3. Based on the description of additional activities to be implemented using the SRASP AF funds, the EFA identified a range of new assumptions to be adopted and associated additional quantifiable benefits to be reflected in the revised analysis.

Component	Activity description	Assumption/expected benefit
Sub-component 1.3: Multiplication of seeds, seedlings, and planting materials	The proposed SRASP AF will scale up the sub-component scope to include procurement and distribution of emergency improved seeds, fertilizers and small farm machinery to farmers and vulnerable rural households for homestead gardening, as a short-term food crisis response as well as simplifying women's manual labor.	Taking into account that the SRASP has already a nation-wide coverage, the original assumption on 1.5 percent increase in yields of annual and perennial crops is kept the same. Moreover, the SRASP AF funded distribution of inputs and small machinery is an emergency intervention to address a short-term food crisis. It was estimated that the additional inputs would be used on the 13,500 ha of cropland, which is about 2 percent of the total sown area in the country. Thus, the overall adoption rate of the original EFA was increased by 2 percent. Additionally, the purchased small farm machinery for vulnerable farms would reduce the time spent for on-farm work by at least 20% for 20,000 farmers (mostly women). Assuming an average time of 25

Component	Activity description	Assumption/expected benefit
		person-days/ha/year required for farming, this would result in 100,000 person-days/year over the country, which is equivalent to the opportunity cost of labor of US$276,815 (estimated at US$2.76/day for unskilled worker) added as a benefit stream to the economic analysis.
Sub-component 2.1: Support the establishment and operation of ALCs	The proposed SRASP AF will support (co-finance) the establishment and operationalization of two additional ALCs in geographical locations to be identified following the same procedure and operation and management modality as in the SRASP.	The design feature (small in size) and services (cooling, storage, packing, logistic facilities etc.) of the ALCs will also be the same as the SRASP, i.e., instead of 3 originally planned, there will be 5 ALCs in total reflected in the EFA.
Sub-component 3.1: Real-time monitoring of agricultural production, land use, and agrometeorology	The proposed SRASP AF will support: developing an early warning system for livestock, including to prepare for hydro-meteorological and temperature extreme events and animal diseases; and strengthening national participation in regional and global early warning systems for hydro-meteorological events, including the procurement of additional mobile agrometeorological stations; improving market and agriculture inputs price information systems, including the scaling up of digital technologies and information platforms.	The losses in overall agricultural output of crops is assumed to be avoided by 25 percent (instead of 20 percent originally estimated for the parent project) due to the further strengthening the early warning, preparedness and response capacity of selected public institutions involved in agricultural production.
Sub-component 3.4: Nutrition improvement	(i) Procurement and distribution of micronutrients and vitamin supplements for pregnant and lactating women and children (6-59 months), and procurement and distribution of RUTFs for children at risk of severe acute malnutrition.	(i) This is a newly introduced sub-component. The economic benefits accruing as a result of this sub-component were estimated using the potential reduction in DALYs.[33] Assuming that a full package of treatment against severe acute malnutrition costs about US$200, this intervention would potentially affect 6,250 children. Each DALY saved was valued at per capita income given that GDP per capita in 2021 was US$897.1[34] , which means that

[33] Disability-adjusted life years. One DALY represents the loss of the equivalent of one year of full health. DALYs for a disease or health condition are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population (WHO, 2019).
[34] World Bank data, 2022, *https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=TJ*

Component	Activity description	Assumption/expected benefit
	(ii) Creation of a centralized supply for food fortification premixes by establishing a "premix revolving fund facility" for the premix (specifically, micronutrients and potassium iodate/iodine) and provision of "seed funds for premix".	this intervention might bring an economic benefit stream of US$ 5.6 million annually (not considering the GDP growth), however, since it will be materialized only in 15-20 years (when treated children and newborns will join the labor force) and the timeframe for economic analysis itself is limited by 20 years, it was not added as a quantifiable benefit to the analysis. (ii) As this activity includes only establishment of the revolving fund with some seed funds for the total amount of US$1 million, however, the funds will be replenished by many other donors/projects besides the proposed SRASP AF, its economic impact was not estimated within the scope of this EFA.

4. Having estimated the additional benefits as above indicated, the revised EFA demonstrated the following results in comparison to the original EFA:

Project	Total cost	ENPV (base case)	EIRR (base case)
Parent project (SRASP)	US$58.0 million	US$135.7 million	18.6 percent
Additional Financing (SRASP+SRASP AF)	US$108.0 million (US$58.0 million + US$50.0 million)	US$158.5 million	14.4 percent

5. Sensitivity analysis. Economic returns were tested against changes in benefits and costs and for various lags in the realization of benefits. In relative terms, the EIRR is equally sensitive to changes in costs and in benefits. In absolute terms, these changes do not have a significant impact on the EIRR, and the economic viability is not threatened by either a 20 percent decline in benefits or by a 20 percent increase in costs, since the EIRR in both cases remains well above the discount rate. A one-year delay in project benefits reduces the EIRR to 13.0 percent, with which it remains economically viable. The results are presented in the table below.

Sensitivity Analysis (20-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 30%	1 year	2 years
EIRR	**14.4%**	13.6%	12.9%	11.0%	15.2%	15.9%	13.5%	12.5%	11.6%	13.0%	11.6%
ENPV (US$ million)	**158.5**	149.3	140.1	112.5	183.5	208.6	133.4	108.4	84.8	128.0	99.3

Greenhouse Gas Accounting

6. For the parent project, an ex-ante assessment of the impact of the project on GHG emissions has been undertaken using the FAO Ex-Act tool. The net carbon balance is the difference between the gross results of With and Without project scenarios achieved for 20 years, including 6 years of project implementation and 14

years of capitalization periods. The amount of total net carbon balance was estimated at -38,440 tCO2-eq of mitigated emissions (which means that carbon sequestration outweighs emissions within the project) per year at full development or -768,793 tCO2-eq during the whole project lifetime.

7. The AF stage GHG analysis has been conducted using the same working file to capture the additional GHG emissions/sequestration resulted in AF funded activities implementation. It resulted in -45,666 tCO2-eq of mitigation per year at full development or -913,326 tCO2-eq for the total project lifetime. The additional emissions/sequestration arise from extended activities under subcomponents 1.3 and 2.1.

8. Namely, under Sub-component 1.3, additional 13,529 ha crop land will be brought under sustainable management using improved seeds and a proper amount of fertilizers. The following table shows the estimated total area to be sown with norms of fertilizers application. This was captured by Cropland management and Inputs use sections of the Ex-Act tool.

№		Area	Fertilizers, tones						
			Nitrogen (N)		Phosphorus (P)		Potassium (K)		
			Per ha	Subtotal	Per ha	Subtotal	Per ha	Subtotal	Total
1	Potato	4,323	0.35	1513	0.1	432	0.1	432	2378
2	Wheat	3,070	0.6	1842	0.2	614	0.1	307	2763
3	Vegetables	4,111	0.3	1233	0.15	617	0.1	411	2261
4	Onion	2,025	0.3	608	0.15	304	0.1	203	1114
Total		**13,529**		**5,196**		**1,967**		**1,353**	**8,516**

9. Within Sub-component 2.1, the parent project estimated the GHG emissions associated with construction of three ALCs with the total buildings area of 20,000 meters2. Assuming that the additional two ALCs will be of the same size, the area was increased to 33,000 meters2. Same as in the parent project GHG analysis, it was estimated that 20 and 80 percent of all materials used in construction works are metal and concrete, respectively. Finally, it was estimated that three operating ALCs contribute to greenhouse gases emissions by usage of electricity. It was assumed that 1 meter2 of ALC requires 100 KWh per year. The below table summarizes the combined results of the parent and AF projects.

Components of the project	Gross fluxes Without	With	Balance	Share per GHG of the Balance All GHG in tCO2eq CO_2 Biomass	Soil	Other	N_2O	CH_4	Result per year Without	With	Balance
	All GHG in tCO2eq Positive = source / negative = sink										
Land use changes											
Deforestation	0	0	0	0	0		0	0	0	0	0
Afforestation	0	0	0	0	0		0	0	0	0	0
Other LUC	0	0	0	0	0		0	0	0	0	0
Agriculture											
Annual	0	-2,854,332	-2,854,332	0	-2,854,332		0	0	0	-142,717	-142,717
Perennial	60,369	-17,796	-78,165	0	0		-40,736	-37,429	3,018	-890	-3,908
Rice	0	0	0	0	0		0	0	0	0	0
Grassland & Livestocks											
Grassland	0	0	0	0	0		0	0	0	0	0
Livestocks	0	0	0				0	0	0	0	0
Degradation & Management											
Forest degradation	0	0	0	0	0		0	0	0	0	0
Peat extraction	0	0	0		0		0	0	0	0	0
Drainage organic soil	0	0	0		0		0	0	0	0	0
Rewetting organic soil	0	0	0		0		0	0	0	0	0
Fire organic soil	0	0	0	0				0	0	0	0
Coastal wetlands	0	0	0	0	0		0	0	0	0	0
Inputs & Investments	8,873,714	10,892,884	2,019,170			1,115,686	903,484	0	443,686	544,644	100,959
Fishery & Aquaculture	0	0	0			0	0	0	0	0	0
Total	8,934,083	8,020,756	-913,326	0	-2,854,332	1,115,686	862,748	-37,429	446,704	401,038	-45,666
Per hectare	15.3	13.7	-1.6	1.9	-4.9	1.9	1.5	-0.1			
Per hectare per year	0.8	0.7	-0.1	0.1	-0.2	0.1	0.1	0.0	0.8	0.7	-0.1

10. Considering the estimated shadow price of carbon that will evolve from year to year according to the World Bank Shadow Price of Carbon Guidance Note, the EIRR and the ENPV were re-calculated. The results of

scenarios with low carbon price (starting from US$41 and evolving over years), high carbon price (starting from US$82 and evolving over year) and without carbon are presented in the table below.

	Without carbon benefits scenario	Low carbon price scenario	High carbon price scenario
ENPV (US$ million)	158.5	184.1	209.7
EIRR	14.4 percent	15.9 percent	17.5 percent

11. The low shadow price of carbon scenario has a potential to improve the EIRR from 14.4 percent to 15.9 percent, while the high shadow price of carbon scenario will improve the EIRR up to 17.5 percent.