
President's memorandum
Proposed additional financing
Republic of Tajikistan
Community-based Agricultural Support Project Plus
(CASP+)

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 61.

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Financing summary

Initiating institution:	IFAD
Borrower/recipient:	Republic of Tajikistan
Executing agency:	Ministry of Agriculture
Total project cost:	US\$99.509 million
Amount of original IFAD loan:	US\$6.75 million
Amount of original IFAD Debt Sustainability Framework (DSF) grant	US\$6.75 million
Terms of original IFAD financing:	Highly concessional: 40 years, including a grace period of 10 years; free of interest with a fixed service charge payable semi-annually as determined by the Fund's Executive Board
Amount of additional financing:	IFAD DSF grant: US\$24.349 million Green Climate Fund (GCF) loan and grant: US\$39.0 million
Terms of additional financing:	IFAD DSF grant GCF loan and grant
Cofinancier(s):	Food and Agriculture Organization of the United Nations (FAO), Committee for Environmental Protection (CEP), State Forest Agency (SFA)
Amount of cofinancing:	CEP: US\$890,000 SFA: US\$890,000 FAO: US\$160,000
Terms of cofinancing:	In kind
Contribution of borrower/recipient:	US\$16.08 million
Private sector:	US\$56,000
Contribution of beneficiaries:	US\$4.6 million
Amount of original IFAD climate finance:	US\$13.01 million
Amount of additional IFAD climate finance:	US\$18.501 million
Cooperating institution:	IFAD

I. Background and project description

A. Background

1. The Community-based Agricultural Support Project Plus (CASP+) in the Republic of Tajikistan was originally considered by IFAD's Executive Board in December 2021.¹ The Executive Board approved US\$13.5 million in financing under the Eleventh Replenishment of IFAD's Resources (IFAD11) performance-based allocation system (PBAS) cycle, including an IFAD loan of US\$6.75 million equivalent on highly concessional terms and a Debt Sustainability Framework (DSF) grant of US\$6.75 million equivalent. The financing gap of US\$63.3 million was expected to be filled in part by the Republic of Tajikistan's IFAD12 PBAS allocation and cofinancing from the Green Climate Fund (GCF).
2. The proposed additional financing of US\$24.3 million will contribute to: (i) covering the original financing gap; and (ii) achieving the outreach and output targets set at design.

B. Original project description

3. **Goal and development objective.** The goal of CASP+ is to contribute to the country's shift towards low-emission sustainable development pathways and climate adaptive agricultural production practices. The CASP+ development objective is to increase the resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change.
4. **The project has three components:** (1) Strengthening public sector capacity for transformative climate-resilient management of natural resources; (2) Investments in community capacity for adaptation and resilience to climate change; and (3) Strengthening livelihoods for enhanced resilience through market-based approaches.

II. Rationale for additional financing

A. Rationale

5. CASP+ addresses the main drivers of poverty and climate change vulnerability in rural areas in the country. Highly vulnerable rural livelihoods are facing increasing climate change impacts, including: rising temperatures, more erratic rainfall patterns and more frequent droughts, floods, mudflows and landslides causing severe economic damage.
6. Since 2008, IFAD has invested US\$80 million in four projects in Tajikistan, directly benefiting 128,000 households. Critical experiences of IFAD in the country include the Khatlon Livelihoods Support Project, which introduced the establishment of village organizations in 82 communities as the entry point for preparation and implementation of community action plans (CAPs). A similar approach specific to livestock was scaled up by the Livestock and Pasture Development Project (phase I and II from 2011-2021), enhancing the CAPs by adding a pasture plan to rationalize the use of common pastures.
7. IFAD's comparative advantage in its portfolio in the country comprise: (i) a focus on vulnerable rural populations; (ii) improved husbandry practices of small-scale livestock herders; and (iii) systematic strengthening and establishment of rural community level institutions.
8. CASP+ will leverage IFAD's experience of supporting community investments in vulnerable rural areas and in the livestock sector using the CAP methodology. With support and cofinancing from GCF, CASP+ will reinforce the earlier approach with climate change as the entry point, taking past and ongoing efforts with higher climate sensitivity to a significantly larger scale. Support for targeting vulnerable

¹ [EB 2021/LOT/P.14](#).

rural communities includes: (i) a policy framework for climate adaptation and mitigation in the agricultural sector; (ii) enhanced climate resilience; and (iii) improved access and integration with remunerative markets for their products.

9. The small-scale livestock herders' increased herd sizes represent an ecosystem risk. A change in stimuli and incentives is needed to transform current unsustainable practices in rural areas into productive and sustainable livelihoods and production systems that contribute to managing climate risks and improving ecosystem services.

Special aspects relating to IFAD's corporate mainstreaming priorities

10. In line with IFAD's mainstreaming commitments, the project has been validated as:
 - Including climate finance
 - Youth-sensitive **Gender**. Female headed households account for nine per cent of all households and 30 per cent of all poor households. Women face discrimination and inequality in social, economic and political life. The share of women working in the agriculture sector is 75 per cent of all working women and their livelihoods are characterized by gender imbalances in access to and control over productive resources, limited decision-making and discrimination.
12. **Youth unemployment**. Estimated youth unemployment is 17.1 per cent in 2021.² Yet only 43 per cent of Tajikistan's total working age population are officially in the labour force.³ The majority of those working are in low quality jobs in the informal sector. Inactive youth who are neither employed nor in education or training represent 40 per cent of the total youth population, which is high by international standards.⁴ As a result of the unfavourable outlook on the labour market in Tajikistan, young people may exit the labour force after a few failed attempts, or leave the domestic labour force in favour of international migration. Promotion of value chain development, development of rural, small and medium-sized enterprises and improvement of education systems are among the measures suggested by a recent World Bank report to address youth unemployment issues in rural areas, which became even more urgent during the COVID-19 pandemic.
13. **Climate profile**. Climate change is a serious concern for Tajikistan as the country is highly exposed and has relatively low adaptive capacity. The country's climate strongly exhibits aridity, high temperatures and significant inter-annual variability in almost all climatic variables. Temperatures are rising across the country. The change in rainfall patterns with an increase in the February to May season and a reduction in the June to October season pose a threat to the agricultural cropping calendar and pasture productivity. This is changing the availability of productive pastures for extensive livestock grazing, especially the shortage of winter pastures and cultivated feed. Climate projections predict worsening trends and events, with significant impacts on ecosystems, livelihoods and the economy. Along with a 30 per cent increase in irrigation demand (driven by higher temperatures that push up evaporation) and combined with increased heat extremes that negatively affect crop productivity, substantial risks for irrigated and rainfed agricultural systems can be expected.
14. **Climate vulnerability analysis**. The climate vulnerability index analysis (including both climate and socio-economic variables), carried out for the design of CASP+ and documented in the Social, Environmental and Climate Assessment Procedures (SECAP), shows high vulnerability throughout the country, with hotspots in eastern and central Khatlon and in the southeast of Sughd. On the

² World Bank Open Data (June 2022). Unemployment, youth total (% of total labor force ages 15-24) (modeled ILO estimate) – for Tajikistan. International Labour Organization, ILOSTAT database.

³ [Strokova, Victoria; Ajwad, Mohamed Ihsan](#). (2017). Tajikistan Jobs Diagnostic: Strategic Framework for Jobs. Jobs Series; No. 1. World Bank, Washington, DC.

⁴ World Bank, 2017.

climatic side, these areas are associated with more adverse slow onset climate change impacts: rising temperatures, posing greater challenges for animal health and agricultural productivity; and changing rainfall patterns, modifying the grazing seasons and forcing herders to resort to alternative feeding and water sources. In addition to these are rapid onset impacts such as a higher risk of droughts, mudslides and landslides, further reducing the productivity of soils and calling for disaster management measures. From a socio-economic perspective, these areas present weaker adaptive capacity on the part of the population and lower quality of life (access to water and electricity) and income. These findings are in line with and complement recent assessments by the World Food Programme and United Nations Development Programme. The climate change vulnerability analyses suggest higher adaptation needs in rural mountainous areas, characterized by a predominance of agroforestry and livestock related livelihoods that require optimization of land and water resources.

15. **Social inclusion.** Due to prevailing social norms, proactive measures need to be taken in order to ensure that Tajik women are able to fully participate in rural societies. Youth are faced with limited employment opportunities, forcing them to migrate from rural areas to either urban areas or abroad. Additional issues faced by youth relate to the educational system, which is not geared to upgrading their skills. Bearing in mind both factors, CASP+ will be a fully gender and youth mainstreamed project. Moreover, by mainstreaming gender and youth, CASP+ presents a major opportunity to sustainably enhance climate-resilient livelihood patterns. Specifically, a gender assessment reveals that rural women play a key role in natural resource management as entry points and enablers for sustainable climate change adaptation and mitigation measures.

B. Description of geographical area and target groups

16. Tajikistan is a landlocked country with a population of 9,313,800 people in 2020, 74 per cent of whom live in rural areas. It is the poorest of the former Soviet republics, with per capita GDP estimated at US\$874 in 2020. GDP was US\$8.117 billion in 2019, of which 20 per cent was derived from the agriculture sector. Remittances from Tajik nationals working abroad represent 28 per cent of GDP, one of the highest rates worldwide.
17. The project area covers 21 districts: 16 in Khatlon region, 3 in the region of Republican Subordination and 2 in Sughd region. The main target group is poor communities and those households whose livelihoods are severely affected by climate change. The project is expected to reach 100,000 target households (650,000 people) in the 400 target villages.

C. Components, outcomes and activities

Component 1: Strengthening public sector capacity for transformative climate-resilient management of natural resources

18. Tajikistan has achieved important progress in developing a strategic vision for water and disaster management. However, the integration of a climate change perspective in the agriculture sector and natural resources management is not very strong. This leads to fragmented governance of natural resources and limits the opportunities for sustainable development. To address this, component 1 includes two outcomes:

Outcome 1.1: By the end of year 7, capacities of relevant national institutions for climate-resilient natural resources management are strengthened

19. National capacities to plan, manage and monitor the natural resource base at central and lower administrative tiers will be strengthened with a focus on forests and pastures. The capacity of the State Forestry Agency (SFA) will be

strengthened. A forestry curriculum recently developed for Tajikistan with the assistance of the German Agency for International Cooperation (GIZ), will be rolled out to the 14 project state-owned forest enterprises or *leskhoz*. The operational capacities of national institutions responsible for pasture management and livestock, as well as research and academic institutions, will be strengthened.

Outcome 1.2: By the end of year 7, the enabling environment for climate adaptive, inclusive and integrated management of pasture, forestry and livestock resources is enhanced

20. Policy engagement will focus on animal husbandry and health, pasture management and promoting a green economy. Given the centrality of an integrated ecosystem approach for a transformative and climate adaptive livestock sector for rural livelihoods, and the concerns regarding its contribution to ecosystem services, the project will also provide assistance in the use of decision tools such as the Ex-Ante Carbon-balance Tool (EX-ACT), the Global Livestock Environmental Assessment Model-interactive (GLEAM-i), and the Biodiversity Integrated Assessment and Computational Tool (B-INTACT).

Component 2: Investments in community capacity for adaptation and resilience to climate change

21. This component will develop and implement 400 climate sensitive community action plans (CsCAPs) in the selected districts. The CsCAPs will include ecosystem improvement and agricultural resilience investments, including improved pasture management, afforestation and forest rehabilitation, climate-resilient infrastructure and community agricultural equipment for improved productivity.

Outcome 2.1: By the end of year 3, 400 climate-sensitive CsCAPs based on 21 district level climate diagnostics are developed

22. A map-based profile of each district, digitized and incorporating layers for vulnerability analysis, will be created to indicate the geographic areas where the effects of climate change pose the greatest threat to vulnerable communities and ecosystems.

Outcome 2.2: By the end of year 7, 400 climate-sensitive CsCAPs implemented in 21 districts with benefits for 100,000 rural households

23. The CsCAPs will support climate change adaptation, mitigation and disaster risk reduction through **ecosystem resilience and adaptation investments**, including subprojects in pasture management investments, forestry, climate-resilient infrastructure investments and community agriculture equipment for productivity improvement.

Component 3: Strengthening livelihoods for enhanced resilience through market-based approaches

24. This component strengthens the capacities of smallholders to invest in climate-resilient and diversified production systems. The current production systems are vulnerable to climate change impacts and omit market opportunities.

Outcome 3.1: By the end of year 7, 105,600 smallholder livestock farmers receive artificial insemination, animal health or training services to increase productivity of their livestock

25. Livestock productivity is currently low and limited by the poor genetic potential of animals, health status and animal husbandry practices. This outcome will increase the productivity of livestock production systems, and encourage reducing herd sizes.

Outcome 3.2: By the end of year 4, nine productive alliances between livestock producers' groups and private aggregators established and operational

26. This outcome will facilitate business partnerships between groups of smallholder farmers and private sector actors on dairy and beef value chains. These partnerships will be formalized through agreements with selected private sector partners on an implementation plan and commitments on prices, delivery and quality requirements.

Outcome 3.3: By the end of year 7, 12,400 smallholders have strengthened climate-resilient production practices and private sector market linkages

27. This outcome will facilitate two types of common interest groups (CIGs) to access support services to identify, analyse and adopt climate-resilient production practices. The first type will comprise 1,020 CIGs, strengthening capacity to adapt production systems to changing climate conditions and identifying opportunities to link to local markets. The second type of market-linked groups will comprise 110 CIGs trained in entrepreneurial skills and business plan development to link up with profitable agrifood value chains.

D. Costs, benefits and financing

Project costs

28. The total investment and incremental recurrent project costs, including physical and price contingencies, are estimated at about US\$99.5 million. Physical and price contingencies are less than 1 per cent of total project costs. These costs comprise investments associated with CsCAP implementation, provision of IFAD grants under windows 1 and 2, and financing of productive alliances representing around 75 per cent of the total project costs (expressed as a lump sum, no contingencies). The estimated amount of additional financing is US\$63.3 million. These funds comprise: US\$24.3 million IFAD grant and GCF financing totalling US\$39 million (US\$30.0 million grant and US\$9.0 million loan). Project costs by financier for the original cost estimates and additional financing are provided in table 1 below. Project costs for the additional financing by component and financier are provided in table 2.
29. The following project components are fully counted as climate finance: (1) Strengthening public sector capacity for transformative climate-resilient management of natural resources; (2) Investments in community capacity for adaptation and resilience to climate change; and (3) Strengthening livelihoods for enhanced resilience through market-based approaches. As per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the total amount of IFAD climate finance for this additional financing requests is estimated at US\$18.501 million. Adding this to the US\$.011 million in IFAD11 climate finance, the project includes a total of US\$31.512 million in IFAD climate finance.

Table 1
Original and additional financing summary
 (Thousands of United States dollars)

	<i>Original financing</i>	<i>Additional financing</i>	<i>Total</i>
IFAD loan	6 750		6 750
IFAD DSF grant	6 750	24 349	31 099
GCF		39 000	39 000
FAO	160		160
Other financiers*	22 500		22 500
Total	36 160	63 349	99 509

* This item includes contributions from the borrower/recipient, beneficiaries, CEP, SFA, Ministry of Agriculture and the private sector. The contribution from the borrower/recipient and beneficiaries has increased from a total of US\$19.50 million in the original financing to US\$20.66 million equivalent, in line with the amount of IFAD additional financing.

Table 2
Additional financing: project costs by component (and subcomponent) and financier
 (Thousands of United States dollars)

<i>Component</i>	<i>Additional IFAD DSF grant</i>		<i>GCF loan</i>		<i>GCF grant</i>		<i>Total</i>
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>
1. Strengthening public sector capacity for transformative climate-resilient management of natural resources	89	5			1 816	95	1 904
2. Investments in community capacity for adaptation and resilience to climate change	14 504	30	9 000	18.6	24 804	51.4	48 308
3. Strengthening livelihoods for enhanced resilience through market-based approaches	9 567	80			2 338	20	11 904
4. Programme management	190	15			1 042	85	1 233
Total	24 349	38.4	9 000	14.2	30 000	47.4	63 349

Table 3
Additional financing: project costs by expenditure category and financier
(Thousands of United States dollars)

<i>Expenditure category</i>	<i>Additional IFAD DSF grant</i>		<i>GCF loan</i>		<i>GCF grant</i>		<i>Total</i>
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>
I. Investment costs							
A. In kind	-	-	-	-	-	-	-
B. Civil works, goods, equipment and services	21 468	40.5	9 000	17.0	22 559	42.5	53 028
C. Technical assistance and studies							
International technical assistance	49	13.2	-	-	319	86.8	368
National technical assistance	2 400	45.4	-	-	2 892	54.6	5 291
Studies	278	57.2	-	-	208	42.8	486
Travel	57	14.8	-	-	329	85.2	386
Subtotal technical assistance and studies	24 252	40.7	9 000	15.1	26 307	44.2	59 558
D. Other grants	-	-	-	-	960	100.0	960
E. Training and workshops							
Training and workshops	47	3.9	-	-	1 156	96.1	1 203
Total investment costs	24 299	39.4	9 000	14.6	28 423	46.1	61 722
II. Recurrent costs							
A. In kind	-	-	-	-	-	-	-
B. Salaries and allowances	50	6.7	-	-	702	93.3	753
C. Operating expenses							
Vehicles	-	-	-	-	595	100.0	595
Office	-	-	-	-	92	100.0	92
Other	-	-	-	-	187	100.0	187
Subtotal operating expenses	50	3.1	-	-	1 577	96.9	1 628
Total recurrent costs	50	3.1	-	-	1 577	96.9	1 628
Total	24 349	38.4	9 000	14.2	30 000	47.4	63 349

Table 4
Project costs by component and project year (PY)*
 (Thousands of United States dollars)

<i>Components</i>	<i>PY1</i>		<i>PY2</i>		<i>PY3</i>		<i>PY4</i>		<i>PY5</i>		<i>PY6</i>		<i>PY7</i>		<i>Total</i>
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>
A. Strengthening public sector capacity for transformative climate-resilient management of natural resources	386.5	14.8	637.0	24.5	386.7	14.8	313.1	12.0	369.9	14.2	286.1	11.0	224.9	8.6	2 604.3
B. Investments in community capacity for adaptation and resilience to climate change	6 831.4	9.9	12 332.5	18.0	12 296.1	17.9	12 216.1	17.8	12 144.4	17.7	12 053.4	17.6	787.8	1.1	68 661.5
C. Strengthening livelihoods for enhanced resilience through market-based approaches	563.3	2.3	2 708.8	11.2	6 614.0	27.3	7 516.7	31.0	5 936.2	24.5	791.6	3.3	131.5	0.5	24 262.1
D. Project management	857.0	21.5	498.7	12.5	540.4	13.6	522.1	13.1	530.6	13.3	507.1	12.7	525.1	13.2	3 981.1
Total	8 638.2	8.7	16 177.0	16.3	19 837.2	19.9	20 568.0	20.7	18 981.1	19.1	13 638.2	13.7	1 669.3	1.7	99 509.0

* The project costs by component and PY include both the original and additional financing.

Financing and cofinancing strategy and plan

30. Following the approval of this additional financing, CASP+ will be financed by a loan of US\$6.75 million and DSF grant of US\$6.75 million; an additional US\$24.3 million DSF grant; FAO financing of US\$0.16 million; a government contribution in the form of taxes of US\$15.2 million; and a beneficiary contribution of US\$4.6 million. Additional contributions include in-kind contributions from the Ministry of Agriculture for US\$0.90 million, the private sector for US\$0.06 million, CEP for US\$0.89 million and the SFA for US\$0.89 million. A US\$30.0 million grant and US\$9.0 million loan from GCF is expected to be approved during the first semester of 2023.

Disbursement

31. The duration of CASP+ will be seven years. The ratio of investments to recurrent cost is 96:4. The main categories of expenditures under investment costs are civil works, goods, equipment and services, grants, training and workshops, technical assistance and studies. Under recurrent costs, the main categories are salaries and allowances and operating costs.
32. The project will have segregated, but integrated, funds flow, budgeting and accounting systems to ensure a clear, verifiable audit trail. This will be ensured by establishing a designated account each for IFAD loan and grant, beneficiary contributions and government counterpart funds. Both the project management unit (PMU) and the implementation group for the project (IGP) will maintain updated information on the use of all sources of funds in their accounting systems.
33. Withdrawal applications will be prepared by the PMU and IGP using the revolving fund modality by submitting interim financial reports (IFRs) under the report-based mechanism.

Summary of benefits and economic analysis

34. Economic and financial analysis. The base-case economic rate of return (ERR) is estimated at 21.8 per cent. The expected net present value discounted at 6 per cent is US\$141.6 million. The economic returns were tested against changes in benefits and costs and for various lags in realizing benefits. In relative terms, ERR is equally sensitive to changes in costs and benefits. In absolute terms, such changes do not have a significant impact on ERR and economic viability is threatened neither by a 20 per cent decline in benefits nor by a 20 per cent increase in costs. In both cases, the ERR remains well above the discount rate. The project is therefore economically viable, justified and recommended for financing from an economic point of view.

Exit strategy and sustainability

35. There are several elements embedded in CASP+ investments that support its exit strategy and sustainability. Among them, a key element is that CASP+ represents the extension and natural evolution of past IFAD-funded projects and technical interventions, which opened up and improved pasture usage and related institutional capacities, responding to stimuli from the Pasture Law. CASP+ embeds into pasture investments other interlinked dimensions of agricultural development and adaptation to climate change.
36. CASP+ sustainability rests upon: (i) involvement of counterparts in all investment activities at national and local levels; (ii) tailored and strategic capacity development of institutions and individuals; (iii) strengthening of policy and regulatory frameworks for improved governance; (iv) use of participatory approaches to ensure beneficiary ownership; and (v) a clear plan for operation and maintenance of all infrastructure, assets and equipment provided under the project.

III. Risk management

A. Risks and mitigation measures

37. The country's **risk rating continues to be high**, with a corruption perception index (CPI) score of 25. Tajikistan's CPI ranking was 150th of 180 countries in 2021, indicating that corruption is a major issue. The country has been experiencing high inflation rates along with fluctuations in local currency against the United States dollar. Despite the high inherent country risk, the current financial management risk for ongoing projects in Tajikistan is rated between moderate and low, and mitigating measures currently being successfully applied for ongoing projects will be applied to CASP+ as well, resulting in a low residual financial management risk.

Overall risk summary

<i>Risk areas</i>	<i>Inherent risk rating</i>	<i>Residual risk rating</i>
Country context	Substantial	Moderate
Sector strategies and policies	Moderate	Low
Environment and climate context	Substantial	Moderate
Project scope	Moderate	Low
Institutional capacity for implementation and sustainability	Moderate	Low
Financial management	Moderate	Low
Project procurement	Moderate	Low
Environment, social and climate impact	Moderate	Moderate
Stakeholders	Moderate	Low
Overall	Moderate	Low

B. Environment and social category

38. **The project is considered to be a category B** operation and is not expected to have any significant adverse environmental or social implications. Environmental risks associated with activities such as construction of agricultural infrastructure or rehabilitation of rural roads will be mitigated by following the environmental laws of Tajikistan or IFAD environmental and social policy, whichever is more stringent. Tajikistan has a well-developed environmental legal and regulatory framework.

C. Climate risk classification

39. The CASP+ climate risk classification is high and is expected to be highly sensitive to climate risk patterns that are likely to compound existing food security, energy security and poverty challenges. CASP+ will aim at reducing vulnerability of the rural poor to those risks and project funds are allocated to ensure climate adaptation and resilience of both infrastructure and people's livelihoods. Furthermore, a GCF proposal is being developed in parallel and may reinforce project adaptation, as well as mitigation activities.

IV. Implementation

A. Compliance with IFAD policies

40. The CASP+ project is aligned with IFAD12 priorities and policies. It addresses cross-cutting issues related to gender, youth, nutrition and climate change in support of the IFAD12 mainstreaming agenda. In addition, reporting will focus on nutrition and climate change.

B. Organizational framework Management and coordination

41. **CASP+ will operate under the leadership** of the Ministry of Agriculture (lead project agency). The PMU under the Ministry of Agriculture will have overall responsibility for project coordination, oversight and reporting to IFAD and the

Government, including liaising closely with other implementing agencies. The other implementing agencies comprise the IGP under CEP, playing a leading role on climate change policies and strategies; and FAO, which will provide specific technical support on defined activities with GCF financing.

42. **A project steering committee** will be set up at national level with overall responsibility for providing strategy and policy guidance to ensure that project objectives are achieved. The project steering committee will be co-chaired by the Ministry of Agriculture and CEP, and will coordinate with GCF to assess how to strengthen and build on ongoing GCF investments in the country.
43. **District governments and *jamoats*** (first level of local self-government) at village level are expected to play an important role in coordination, helping to raise awareness about the project among key stakeholders and helping to incorporate climate vulnerability assessments in local development planning based on district diagnostics.

Financial management, procurement and governance

44. Both PMUs will include well-structured financial management teams headed by qualified finance managers before the project starts implementation. The State Enterprise Project Management Unit, Livestock and Pasture Development (SEPMU) will be responsible for the overall financial management of the project. The core project financial management processes will be aligned with country systems and IFAD requirements as outlined below.
45. **Flow of funds.** For the IFAD loan and grants, initial advances will be provided to the project accounts to meet expenditures for the first six months of implementation. Further advances will be withdrawn using the revolving fund modality and report-based disbursement method. For the counterpart funds and cofinancing, estimated annual requirements will be included in the annual workplan and budget (AWPB).
46. **Budgeting.** SEPMU will consolidate the project budget following a bottom-up approach based on a participatory exercise inclusive of all project parties. Consolidated AWPBs will be submitted for approval 60 days before the start of the financial year.
47. **Internal controls.** Robust internal controls will be established to protect project funds against any financial impropriety. The financial management team will conduct a monthly budget vs actual analysis, bank reconciliations and random inspections of NGOs and partner agencies' field work to prevent, detect and rectify compliance gaps in implementation.
48. **Reporting.** The project will submit IFRs indicating progress against components and categories vis-à-vis the AWPB disaggregated by finance source, submitted on a quarterly basis to justify used funds and to withdraw further advances from the loan and grant accounts.
49. **Internal audit.** An internal auditor reporting directly to the project steering committee will be hired to conduct an internal audit of all project activities and ensure compliance with the recommendations of the supervision missions, external audit government directives, etc.
50. **The Public Procurement Law (PPL)** of 2006, as amended on April 16, 2012, is the major legal instrument governing public procurement in Tajikistan. The PPL does not contain a clear provision exempting public procurement financed by international financial institutions from the PPL. For this reason, and in view of other shortcomings of the PPL, CASP+ will adopt the IFAD Procurement Guidelines.
51. **Governance.** The CASP+ design introduced a clear mechanism to ensure good governance of the activities between the three implementing agencies. The PMU, acting through the Ministry of Agriculture, will implement the project jointly with

CEP and FAO. Good governance will be assured by overall operational accountability and transparency, financial management, procurement of goods and services, environmental governance, gender equality and mechanisms for complaints and remedies.

C. Monitoring and evaluation, learning, knowledge management and strategic communication

52. Main planning tools comprise the logical framework, including indicators at output, outcome and impact level selected from among the core indicators of IFAD and GCF (based on the relevant performance measurement framework). The PMU will review and update the logical framework during project start-up and fine-tune the AWPB, amending data and information with results from the baseline survey and subsequent household surveys.
53. The monitoring and evaluation system for CASP+ will build on the existing georeferenced system set up for the completed Livestock and Pasture Development Project Phase II (LPDP-II) and ongoing CASP+, managed by the PMU, which is provided with a management information system (MIS) designed in such a way as to allow for sex and age disaggregation of data, poverty profiling of households, education status, livestock ownership pattern, information on livestock yields, pasture use and management practices, and asset base and employment. The logframe will be informed by baseline, midterm and completion surveys in line with IFAD core outcome indicators (COI) measurement methodology.
54. **Learning and knowledge management** are essential elements of CASP+, supporting a climate sensitive paradigm shift in policies and investments, increasing resilience and poverty reduction patterns.
55. All the interventions, data and results generated will be effectively communicated and disseminated to different stakeholders and beneficiaries at national and district level. Specialized services will be contracted to implement gender-sensitive communications campaigns to promote participation and awareness-raising and to strengthen the project partnerships.
56. **Innovation and scaling up.** CASP+ is the first IFAD project in Tajikistan that has climate change as an entry point for investment support and the only one in the country that promotes climate change adaptation combined with potential carbon sequestration on a large scale. It presents a number of innovative approaches and investments, including the use of climate evidence to support planning and decision-making at local level through digitized maps for vulnerability analysis, georeferencing of all investments to ensure appropriate monitoring, promotion of climate adaptive techniques and technologies for agriculture and livestock production, and promotion of market-based approaches to stimulate the private sector's engagement in rural areas.

D. Proposed amendments to the financing agreement

57. Subject to the approval of the Executive Board, the negotiated text of the project financing agreement will be updated in order to include the provisions for additional/gap financing. Counterpart funding will be adjusted to reflect the updated cost tables.

V. Legal instruments and authority

58. A financing agreement between the Republic of Tajikistan and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient.
59. The Republic of Tajikistan is empowered under its laws to receive financing from IFAD.

60. I am satisfied that the proposed additional financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

61. I recommend that the Executive Board approve additional financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a Debt Sustainability Framework grant to the Republic of Tajikistan in an amount of twenty-four million three hundred forty-nine thousand United States dollars (US\$24,349,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

Original financing logical framework

Results Hierarchy	Indicators				Means of Verification		Assumptions	
	Name	Base line	Mid-Term	End Target	Source	Frequency		Responsibility
Outreach	1.b Estimated corresponding total number of households members				Outcome Survey	Annual	PMU	PMU management is efficient, the country recover from covid-19 aftermaths, macro-economic and political conditions are stable.
	Household members - Number of people	0	260000	650000				
	1.a Corresponding number of households reached				Project M&E system	Annual	PMU	
	Households - Number	0	40000	100000				
	1 Persons receiving services promoted or supported by the project				Project M&E system	Annual	PMU	
	Females - Number		133900	334750				
	Males - Number	0	126100	315250				
	Young - Number	0	78000	195000				
	Not Young - Number	0	182000	455000				
	Indigenous people - Number	0	NA	NA				
Non-Indigenous people - Number	0	NA	NA					
Total number of persons receiving services - Number of people	0	260000	650000					
Project Goal Contribute to the country's shift towards low emission sustainable development pathways and climate-adaptive agricultural production practices	Number poor smallholder households whose climate resilience has been increased				Surveys	Baseline/MTR/Completion	PMU	Macro-economic and political conditions are stable and the interest of Government for Green Economy is maintained and sustained.
	Households - Number		32000	80000				
Development Objective Increase resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change	Income increase in TJS				Surveys	Baseline/MTR/Completion	PMU	Macro-economic conditions are stable and impact of potential climate hazards does not damage local / national economy. The covid-19 pandemic has eased and allows field activities. Availability and interest of local communities and commitment to the investments in improved NR Availability of service providers able to support outreach and mobilization of communities. Macro-economic and political stability
	Income increase in TJS - Percentage (%)		6	15				
	Number of targeted HH reporting increased income from rural livelihoods				Surveys	Baseline/MTR/Completion	PMU	
	Households - Number		32000	80000				
	4.1 GCF: Tons of carbon dioxide equivalent (t CO2eq) reduced or avoided (including increased removals) as a result of Fund-funded projects/programmes				Ex-ACT and GLEAM-i Carbon accounting tools	Baseline/MTR/Completion	IFAD	
	Tons of CO2e emissions - Number	0	2 000 000	7 062 655				
	A2.2 (GCF) Number of food secure households (in areas/periods at risk of climate change impacts)							
	Total number of household members - Number of people		208000	520000				
	Males - Number		100880	252200				
	Females - Number		107120	267800				
GCF Core/a. Total Number of direct and indirect beneficiaries				Surveys	Baseline/MTR/Completion	PMU		
Direct Beneficiaries (women) - Number of people		133900	334750					
Direct Beneficiaries (men) - Number of people		126100	315250					

	Direct Beneficiaries (men/women) - Number of people	260000	650000				
	Indirect Beneficiaries (men) - Number of people	440075	1100187				
	Indirect Beneficiaries (women) - Number of people	467296	1168239				
	Indirect Beneficiaries (men/women) - Number of people	907370	2268426				
	1.2.2 Households reporting adoption of new/improved inputs, technologies or practices			Surveys	Baseline/MTR/Completion	PMU	
	Total household members - Number of people	208000	520000				
	GCF Core/b. Number of beneficiaries relative to total population of the country (direct)			Surveys	Baseline/MTR/Completion	PMU	
	% beneficiaries (direct) - Percentage (%)	2.8	7				
	% beneficiaries (indirect) - Percentage (%)	12.5	31.3				
Component 1. Strengthening public sector capacity for transformative climate-resilient management of natural resources							
Outcome Outcome 1 (5.0 for GCF) Strengthened institutional and regulatory systems for climate-responsive planning and development	(IFAD) Policy 3: Number of existing/new laws, regulations, policies or strategies proposed to policy makers for approval, ratification or amendment.			Surveys	Baseline/MTR/Completion	PMU	Commitment of project partners (government agencies, development partners, civil society) to inclusive and constructive dialogue
	Number of national policies - Number	3	4: (1) Pasture law; (2) breeding strategy; (3) policy on private veterinary services and (4) Green Economy Concept				
Output Output 1.1 By year 7, capacities of relevant national institutions for climate-resilient natural resources management are strengthened	Number of individuals from relevant institutions trained in evidence-based joint climate-adaptive natural resources planning, management and monitoring			Surveys	Baseline/MTR/Completion	PMU	Commitment of targeted institutions; Limited staff turnover; constructive partnership created will continue after closure
	Individuals (National Level) - Number	50	100				
	Individuals (Local Level) - Number	120	200				
Output Output 1.2 By year 7, enabling environment for climate adaptive, inclusive and integrated management of pasture, forestry and livestock resources is enhanced	Number of institutions utilizing the evidence-based georeferenced tool (including remote sensing) for integrated NRM			Surveys	Baseline/MTR/Completion	PMU	Willingness to adopt accountable georeferenced M&E and planning system for NR with remote sensing data use Government and relevant institutions' commitment to a shift to green economy and integrated ecosystem management
	Number of Institutions (National level) - Number	0	10	10			
	Number of Institutions (Local level) - Number	0	7	7			
Component 2. Investments in community capacity for adaptation and resilience to climate change							
Outcome Outcome 2: 9.0 GCF: Improved management of land or forest areas contributing to emissions reductions	9.1 GCF: Hectares of land or forests under improved and effective management that contributes to CO2 emission reductions:			Surveys	Baseline/MTR/Completion	PMU	Availability and interest of local communities and commitment to the investments in improved NR; climate sensitive planning and local level partnerships created will continue after project closure Willingness of rural communities, availability of suitable service providers and commitment of local institutions to support rural communities' investment and planning even beyond project end. Available service providers for agriculture improvement and animal health (including private vets) willing to engage in project areas; agribusiness enterprises willing to engage with smallholders in the project area
	Pastures - Area (ha)	0	50000	180000			
	Forests - Area (ha)	0	1200	8641			
	Agricultural land - Area (ha)	0	500	1416			
	3.2.2 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices				Surveys	Baseline/MTR/Completion	PMU
	Households - Percentage (%)	40	80				
	Total number of household members - Number of people	104000	520000				
	Women-headed households - Number	1600	8000				
	Households - Number	16000	80000				
	SF.2.1 Households satisfied with project-supported services				Surveys	Baseline/MTR/Completion	PMU
	Total number of household members - Number of people	104000	520000				

	Households (%) - Percentage (%)	40	80				
	Households (number) - Number	16000	80000				
	SF.2.2. Households reporting they can influence decision-making of local authorities and project-supported service providers						
	Total number of household members - Number of people	104000	520000				
	Households (%) - Percentage (%)	40	80				
	Households (number) - Number	16000	80000				
	1.2.4 Households reporting an increase in production			Surveys	Baseline/MTR/Completion	PMU	
	Households - Percentage (%)	40	80				
	Total number of household members - Number of people	208000	520000				
	Women-headed households - Number	3200	8000				
	Households - Number	32000	80000				
	1.2.2 Households reporting adoption of new/improved inputs, technologies or practices			Surveys	Baseline/MTR/Completion	PMU	
	Households - Percentage (%)	40	80				
	Total number of household members - Number of people	208000	520000				
	Women-headed households - Number	na	na				
	Households - Number	16000	80000				
Output Output 2.1 By year 3, 400 Climate-sensitive Community Action Plans (CsCAP) based on 21 district level climate diagnostics are developed	Number of District level Climate Resilience Diagnostics (DCRD) prepared			Surveys	Baseline/MTR/Completion	PMU	Willingness of rural communities, availability of suitable service providers and commitment of local institutions to support rural communities' investment and planning even beyond project end.
	Number of DCRDs - Number	21	21				
	Number of Climate-sensitive Community Action Plans (CsCAP) approved			Surveys	Baseline/MTR/Completion	PMU	
	Number of CsCAPs - Number	400	400				
Output Output 2.2 By year 7, 400 Climate-sensitive Community Action Plans (CsCAP) implemented in 21 districts benefiting at least 100,000 rural households	Number of households benefiting from the CsCAPs			Surveys	Baseline/MTR/Completion	PMU	Willingness of rural communities, availability of suitable service providers and commitment of local institutions to support rural communities' investment and planning even beyond project end.
	Households - Number	40000	100000				
	Male-headed HHs - Number	36000	90000				
	Female-headed HHS - Number	4000	10000				
	3.1.4 Land brought under climate-resilient practices			Annual Project M&E	Annual	PMU	
	Hectares of land - Area (ha)	51700	190057				
	Number of hectares of land brought under climate-resilient management			Remote Sensing with ground truthing	Annual	PMU	
	Pastures - Area (ha)	50000	180000				
	Forests - Area (ha)	1200	8641				
	Agricultural land - Area (ha)	500	1416				
Component 3. Strengthening livelihoods for enhanced resilience through market based approaches							
Outcome3: A7.0. Strengthened adaptive capacity and reduced exposure to climate risks.	1.2.4 Households reporting an increase in production			Surveys	Baseline/MTR/Completion	PMU	
	Households - Percentage (%)	40	80				
	Total Number of HH members - Number	208000	520000				
	Total Number of HHs	3200	80000				
	1.2.2 Households reporting adoption of new/improved inputs, technologies or practices			Surveys	Baseline/MTR/Completion	PMU	
	Households - Percentage (%)	40	80				
	Total number of HH members - Number	208000	520000				
	Households - Number	16000	80000				
		6000					
		000					
Output 3.1. By end of year 7, 105,600 smallholder livestock farmers receive AI, animal health or training services to increase productivity of their livestock	3.1.1. Rural producers accessing production inputs and/or technological packages			Annual Project M&E	Annual	PMU	Available service providers for agriculture improvement and animal health willing to engage in project areas Agribusiness enterprises willing to engage with smallholders in the project area The technologies are affordable and disseminated for wider use and replication.

	Females - Number		12880	32200				
	Males - Number		12880	32200				
	Young - Number		7728	19320				
	3.1.2. Persons trained in income-generating activities or business management				Annual Project M&E	Annual	PMU	
	Females - Number		2880	7200				
	Males - Number		2880	7200				
	Young - Number		1728	4320				
	3.1.3. Number of Artificial Inseminations conducted in the project area				Annual Project M&E	Annual	PMU	Available service providers for agriculture improvement and animal health (including private vets) willing to engage in project areas
	Number of Artificial Inseminations conducted in the project area - Number		40000	100000				
	3.1.4. Number of supported private veterinarians				Annual Project M&E; TVA report	Annual	FAO	
	Veterinarians - Number		200	284				
	3.1.5. Number of farmers enrolled in FFS				Annual Project M&E	Annual	FAO	
	Men - Number		360	1200				
	Women - Number		240	800				
	Youth - Number		180	600				
	Men and Women - Number		600	2000				
	3.1.6. Number of farmers accessing demonstration plots on climate resilient technologies				Annual Project M&E	Annual	PMU	
	Men - Number		1440	4800				
	Women - Number		960	3200				
	Youth - Number		720	2400				
	Men and Women - Number		2400	8000				
Output Output 3.2 By end of year 4, 9 productive alliances between livestock producers' groups and private aggregators established and operational	3.2.1. Number of active and operational productive alliances for marketing of livestock commodities				Annual Project M&E	Annual	PMU	Private sector actors are willing to enter and invest in productive alliances arrangements. Market demand for livestock commodities keeps increasing at the same pace
	Number of Productive Alliances supported - Number		0	8	9 (8 on dairy, 1 on beef)			
	3.2.2. Number of farmers accessing market and services through productive alliances facilitated by the project							
	Men - Number		4860	16200				
	Women - Number		3240	10800				
	Youth - Number		2430	8100				
Men and Women - Number		0	8100	27000				
Output Output 3.3 By end of year 7, 12,400 smallholders have strengthened climate resilient production practices and private sector market linkages	3.2.3. Number of Common Interest groups' (Window 1) proposals approved (% women led groups proposal approved and youth - led approved)				Annual project M&E	Annual	PMU	Market linkages established, primary production increased using climate resilient technologies quality improved, value addition, climate resilient technologies scaled-up Women/youth increase their incomes from diversified agriculture activities
	Number of CIGs approved - Number		612	1020				
	3.2.4. Number of Common Interest groups' (Window 2) proposals approved (% women led groups proposal approved and youth - led approved)				Annual project M&E	Annual	PMU	
	Number of CIGs approved - Number		66	110				
	Number of CIG Women members							
	No of CIG Youth members							

Summary of the economic and financial analysis

1. The development objective of Community-based Agriculture Support Programme 'plus' – Phase II (CASP+) is to increase resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change in Tajikistan. It is expected that this will be done by establishing a transformative policy and investment framework leading to climate change resilient livelihood patterns for vulnerable households and to carbon sequestration potential in the country. The core intervention area of the project will comprise the 21 districts: 16 in Khatlon region, 3 in RRS region and 2 in the Sughd region, which are selected as the most vulnerable to the combined effects of direct and indirect impacts of climate change. The selection of districts has also considered: (i) overlaying with watershed/river basin boundaries; (ii) adjacency of selected districts to facilitate implementation; (iii) equal representation of the three agro-ecologic zones for inclusion of upstream and downstream communities highly affected by climate change.

2. To define the potential of livelihoods diversification and enhanced agrifood value chain activities, a sub-criteria in the form of presence and proximity to peri-urban and urban areas, relevant to ensure market access for smallholder producers is also applied.

3. The project will intervene in key hot spots of target areas with investments aimed to (i) improved pasture management; (ii) climate-resilient infrastructure; (iii) agriculture equipment/machinery; (iv) improved forestry management; (v) livelihoods diversification activities and (vi) support of Productive Alliances. These investments will not only fill immediate needs of the populations in terms of climate change, but will also build sustainable patterns to influence public interventions as well as private sector's decisions under the climate resilience angle using ecosystem-based sustainable NRM approaches through implementation of such planning tools as Climate-sensitive Community Action Plans (CsCAPs) and detailed business plans.

4. While the project will focus on the selected target areas, the interventions and the knowledge generated through the evidence-based approach will allow the country to scale-up the approach to additional priority districts and will have a parallel country-wide and demand-driven outreach, in order to stimulate the economic incentives and ensure long term impact beyond the project's investment.

5. **The total outreach** will include will include 650,000 **direct beneficiaries** (51.5 percent women) – about 87,500⁵ households, in communities affected by climate change and 2,268,424 **indirect beneficiaries** (about 305,300 households)⁶. Specific focus will be on vulnerable categories such as: women, women heads of households (WHHs), youth (including young returning migrants) and persons with disability (PWD).

6. **The direct beneficiaries** of the project will benefit from the promotion of climate-sensitive investments at community level, coupled with improvement in the enabling environment and georeferenced knowledge for an effective ecosystem approach; provision of grants aimed at strengthening livelihoods and enhanced resilience through market based approaches; and promotion of Productive Alliances. Besides individuals, the capacities of institutions at local and national level will be also strengthened.

- i. **Institutions at the local level**, namely the stakeholders involved in the Climate-sensitive Community Action Plans (CsCAP) design, implementation, monitoring and evaluation, including Village organizations (VOs), Pasture Users Unions (PUUs), Pasture Users Associations (PUAs), Water Users Associations (WUAs), Common Interest Groups (CIGs) as well as the decentralized institutions mandated to plan, monitor and invest in natural resources (Forest Enterprises, River Basins Councils, Local Administration, Environmental

⁵ According to Working Paper on Financial and Economic Analysis with reference to TAJSTAT 2019, the average household size in target areas is 7.43.

⁶ In accordance with Annex 24: Beneficiary Estimates, GCF Funding Proposal for Community-based Agriculture Support Programme 'plus' – Phase II (CASP+).

Protection offices, Emergency Committees), other natural resources users groups and all relevant stakeholders and Common Interest Groups.

- ii. **Institutions at the national level**, including the Ministry of Agriculture (MoA), the Committee for Environmental Protection (CEP), the Ministry of Energy and Water Resources (MoEWR), the State Forest Agency (SFA), the Food Security Committee (FSC), the Committee of Emergency situations and Civil defence (CES), Committee on Land Management and Geodesy, , the Agency for Land Reclamation and Irrigation (ALRI), Pasture Meliorative Trust (PMT), Tajik Veterinary Association (TVA), and other relevant ministries, research and educational institutions, non-governmental organizations (NGOs) and other civil society organizations (CSOs).

7. The proposed project promotes an innovative approach to leveraging investment in ecosystem-based NRM through a set of instruments by promoting georeferenced climate-sensitive investments at community level, coupled with coordinated efforts to improve the enabling environment for an effective ecosystem approach.

8. The project investments and activities will be executed through the following three components:

- i. Component 1. Strengthening public sector capacity for transformative climate-resilient management of natural resources;
- ii. Component 2. Investments in community capacity for adaptation and resilience to climate change;
- iii. Component 3. Strengthening livelihoods for enhanced resilience through market based approaches;
- iv. Project Management Component.

9. **Low-carbon Investment Delivery approach.** The project will support carbon emission reduction and enhance carbon sequestration potential through different ways: the implementation of the Climate-sensitive Community Action Plans (CsCAPs), including investment in afforestation, reforestation and forest restoration using Joint Forest Management (JFM); preservation of pastures and prevention of further degradation; the potential progressive reduction of the number of livestock, representing a reduction in the carbon emissions and reducing an excessive pressure on pastures. The implementation of CsCAPs and the positive results obtained from the support of agrifood value chains that integrate rural producers to markets will be amongst the main drivers for replication beyond the project. The country will thus shift from a carbon insensitive agrifood sector to a low-carbon emission economy.

Project Benefits

10. CASP+ will contribute to enhancing resilience of at least 87,500 rural households through climate-sensitive investments at community level, and to rehabilitate and sustainably manage about 180,000 ha of rangeland; and severely damaged forests via afforestation/reforestation (namely 5,801 ha through JFM, 1350 ha through direct afforestation and 179 ha in buffer zones). It is also expected that a total of 10,200 households will access 1020 Window 1 grants and 2,200 households will access 110 Window 2 grants. Moreover, a total of 80 FFS will be established in villages where opportunities for establishing value chain projects (Productive Alliances) have been identified. Each FFS will be active during 4 to 5 years and will train 25 participants each (2000 beneficiaries in total). CASP+ investment per beneficiary is set at about USD 30.3 per individual. Sustainability and replicability of project activities will be ensured by strengthening NRM governance at the community level and by the establishment of an improved legal and regulatory environment.

11. **Economic development.** The project will generate direct economic benefits from many of the activities that it will be financed in order to enhance the resilience of

communities and households to climate risks, it is also expected to generate economic co-benefits as a result of many of its activities in the implementation of Climate-sensitive Community Action Plans (CsCAPs) and the support that will be provided to farming households in making the farming practices more resilient through FFS, provision of modern technology, assets and the links with the private sector. It is expected that quantifiable benefits would accrue from: (i) increased livestock and farm-level production and productivity; (ii) reduction of production costs due to the adoption of modern technologies and mechanized operations; (iii) higher yields and products; (iv) a subsequent increased proportion of marketed farm produce; (v) increased employment opportunities for both on-farm and off-farm activities; and (vi) financial inclusion.

12. Enabling environment. The policy and regulatory frameworks revised will ensure adequate capacity to respond to climate hazards, increased inclusiveness of smallholders in agri-food value chains, and improved integrated NRM planning and monitoring capacity.

13. Environmental co-benefits. Carbon sequestration, directly generated by the project investments on rangelands and forestry (and avoided via improved herd management), reduced land degradation and biodiversity increase are the main ecosystem services produced by the project. An ex-ante assessment of the impact of the project on the GHG emission has been undertaken using the FAO Ex-ACT and GLEAM-i tools. The net carbon balance is the difference between the gross results of With and Without Project scenarios achieved during 20 years, including 5 years of project implementation and 15 years of capitalization periods. This amount is estimated at 7.06 million tons of CO₂ equivalent of mitigated emissions during the whole Project lifetime.

14. Gender Strategy and empowering measures: In addition to developing technical skills in (i) small livestock and poultry production or post-harvesting as well as (ii) climate resilient technologies and practices, the project will support women beneficiaries to develop (iii) household nutrition (as part of training modules delivered through FFS) and leadership for the Women Groups (WGs), Women in VOs and PUUs. Gender awareness trainings will contribute fostering more equitable gender roles and relations at household and group levels. Furthermore, through the leadership training, the project expects at least 30 percent women members and 30 percent in leadership position in the institutions/committees formed under the programme.

Key Assumptions for Financial and Economic analyses

15. The parameters for the models are based on information gathered during the design mission: interviews with farmers and entrepreneurs, information from the donor agencies operating in Tajikistan and the ongoing IFAD CASP, LPDP II projects. In particular, information on labour and input requirements for various operations, capital costs, prevailing wages, yields, farm gate and market prices of commodities, input and farm-to-market transport costs were collected. Conservative assumptions were made both for inputs and outputs, and take account of possible risks.

16. Prices. Prices for commodities/inputs reflect annual average and those actually paid/received by the farmer/entrepreneur, and imply potential risks.

17. Exchange rate. The exchange rate used in the financial and economic analysis is fixed at US\$ 1= TJS 11.3⁷, with a strong assumption that future inflation of inputs will be outweighed by increase in output prices. However, in project costing, in order to avoid underestimation of inflation in the country, the average exchange rate for the whole project lifetime is taken as US\$ 1 = TJS 17.5⁸.

18. Internal rate of return. An internal rate of return (IRR) of 12.0%⁹, which is the refinancing rate according National Bank of Tajikistan, has been used as financial discount

⁷ As of July 2021. National Bank of Tajikistan, <https://www.nbt.tj/en/>

⁸ Expert estimations based on historical data from the National Bank of Tajikistan and forecasts done by Economist Intelligence Unit Country report on Tajikistan (3rd and 4th quarters).

⁹ Re-financing rate in Tajikistan from 28 April 2021. National Bank of Tajikistan, <https://www.nbt.tj/en/>

rate (FDR) for the financial analysis to assess the viability and robustness of the investments at farm level. The selection criterion for the IRR is to accept all projects for which the IRR is above the opportunity cost of capital. Using the IRR as the measure, the models' sensitivity to the changes in parameters can be assessed by varying the costs and revenues. For the social opportunity costs of capital or social discount rate (SDR), the analysis has adopted a rate of 6.0%^{10,11,12}, which is a suggested social discount rate for developing countries by the World Bank.

19. **Labour.** Family labour has been valued both in financial and economic analysis. It has been assumed that both family labour and hired unskilled labour market price is TJS 40.0 per day, which has been adjusted by local unemployment rates to calculate its economic value.

20. **The shadow exchange rate (SER)** has been calculated at US\$ 1 = TJS 12.8. Overall conversion factors for inputs and outputs vary between 0.85 and 1.05. The conversion factors have been estimated for the main outputs – wheat (CF is 0.97), meat (CF is 0.98), urea (CF is 1.05) and TSP (CF is 0.81).

21. More details on production and financial parameters for the models can be found in the analysis excel tables in EFA Working Paper.

Financial Analysis

22. The analysis builds upon the precautionary principle, accounting for project benefits in a realistic and conservative manner. A financial analysis is carried out to present the scenarios with and without project interventions. The key-indicators used to carry out the analysis are the net present values (NPVs), financial and economic internal rate of return (FIRR – EIRR), benefit-cost ratio (B/C) and return to family labour.

23. The primary objective of the financial analysis is to determine the financial viability and incentives for the project target group as a result of their engagement in project activities, and hence to examine project's impacts on family labour, financial flow and household incomes.

24. A number of indicative economic activities, which may be supported by CASP+, were identified during the design process. The analysis presents several sets of models.

25. The models show only incremental revenues and costs generated by the new investment. Incremental benefits are estimated by comparison of the without project (WOP) and the with-project (WP) benefits. In each case, the result of the investment translates into additional demand for produce from primary producers and new permanent jobs.

26. The indicative financial models can be divided into five main groups: i) adaptation investments, including investments into pasture management, climate-resilient infrastructure and agricultural machinery by implementing CsCAPs; ii) implementation of CsCAPs on forestry investments; iii) provision of grants through Window 1 which are aimed at livelihood diversification for vulnerable households; iv) provision of grants through Window 2 which are aimed at commercialisation and agribusiness development; v)

¹⁰ The social discount rate used for the economic analysis is based on World Bank's estimations, proposed by a standardized methodology. See Discounting Costs and Benefits in Economic Analysis of World Bank Projects, OPSPQ. May 9, 2016. "Where no country-specific growth projections are available, we suggest using 3% as a rough estimate for expected long-term growth rate in developing countries. Given reasonable parameters for the other parameters for the other variables in the standard Ramsey formula linking discount rates to growth rates, this yields a discount rate of 6%."

¹¹ The discount rate is also in line with the discount rate in recently endorsed Strengthening Resilience of the Agriculture Sector Project In Tajikistan (P175952), ANNEX 4: Economic and Financial Analysis and Greenhouse Gas Accounting

¹² The joint World Bank/ IMF Debt Sustainability Analysis (DSA, May 2020) projects an average growth rate of 3.8 percent in the coming decade.

investments in productive alliances greater access to markets through productive alliances between the smallholder and the private sector.

27. All investments that are included in the climate sensitive action plans (CsCAPs) will be identified through participation of the local governments, local stakeholders and community members to ensure ownership with a clear plan for operation and maintenance after completion.

- i. **Typical village model on Adaptation investments (CsCAPs implementation).** These include investments in *a) Pasture management; b) Climate-resilient infrastructure; and c) Agricultural machinery.* The financial model is constructed on a so-called typical village level, which includes all three listed types of investments.

The potential benefits in this indicative model are represented by increased productivity of milk and meat and increased savings in household budget due to improved productivity of pastures near the villages and access to remote pastures. The main assumption is that the livestock inventories will be controlled and by 2030 the number of heads will be the same as it is now, whereas in WoP scenario the livestock inventories will increase by 12% with a lower productivity and higher pressure on pastures. The financial analysis of the model demonstrates a good IRR of 55.43% with NPV of US\$352,339. The B/C ratio for this model is 2.56, which also proves its financial viability.

- a) *Pasture investments* are aimed at improving the overall productivity of pasture and limit their degradation, but also at reducing the fodder deficit in summer, amplified by Climate Change. The pasture investment plans could include pasture restoration, rotation and access tracks and bridges for remote areas, pasture protection through fencing, reseeding, fertilization, plantation of forage shrubs and trees, access to water for livestock, summer pasture infrastructures, shepherd cabins, night fences and shelters for animals, cattle crushes for treatments, etc. This might include also cross-village pasture management investments that benefit multiple villages such as cooperation on transhumance routes, etc.
- b) *Climate-resilient infrastructure* includes infrastructure, addressing water stresses and the need to adapt to increasing risks of climate-related hazards. It is expected that the provided water infrastructure will help to alleviate the burden on women and increase water availability throughout the year that can also support diversification activities (backyard garden, fructiculture, small animal husbandry) and to meet basic livelihood requirements in isolated areas.
- c) *Agricultural machinery* may include the following list of community equipment eligible under this window: Mowers, Hay rakes, Balers, Forager / Silage machine, Silage/haylage wrappers, Manure spreader (not only for fodder but contributes to improve soil fertility), Hay trailers (flatbed). In addition, other category of mechanization equipment that could be considered are those that can be used both for hay/fodder and other crops such as: Tractors, tillage equipment (plough, harrows, cultivator, etc.), trailers, Planters, Fertilizer spreaders (used with good agricultural practices).

- ii. **Forestry investments (CsCAPs implementation).** These are operated in collaboration with leskhoz (Forest enterprises depending on the State Forest Agency), and with the participation of forest users groups, will aim to complement the restoration of ecosystems and the protection of areas vulnerable to climate hazards (disaster risk reduction), at the same time providing additional sources of income to rural communities. Forest investment will include: (i) Joint Forest Management (JFM): where a contract is created

between JFM household and Leskhoz for the management (initially for 20 years) of a plot of land where the yield from the plot is split between each party to the contract; (ii) Direct Leskhoz Forestry: where forest is re-established on Leskhoz land using community labour. Moreover some forestry investments will be implemented in buffer zones of protected areas: JFM will be applied through Leskhoz in the buffer zone of Protected Area (in the project area this is limited to Sh. Shohin district).

Besides specifying the modality of implementation (JFM or direct by Leskhoz), 1ha forestry models were built by different specie type, such as riparian forest, fruit and nut plantation, pistachio plantation, juniper forest plantation, juniper forest plantation with natural regeneration, saxaul plantation and agroforestry model. The direct quantifiable financial benefits would accrue from sales of timber, fuelwood, nuts, fruit and berries collected on plantation depending on model type. The financial analysis reflects the leaseholders' perspective and estimated NPVs for the mentioned models vary from US\$ 134 to US\$ 3,133, while IRRs are in the range of 14.98% to 35.85%

- iii. **Provision of Window 1 grants.** The Window 1 will be for grants of up to 8,000 USD. These grants could be for, e.g. small-scale processing equipment, local storage infrastructure, community-based seed production, inputs and service provision, drip irrigation, greenhouses, nurseries, shelterbelt establishment, riverbank stability, access to renewable energy. Farmers accessing Window 1 will match the grant with a 10 percent cash contribution. For the financial analysis, the following three indicative models were selected: a) *bee-keeping*; b) *greenhouse*; and c) *drip irrigation*.
- a) *Bee-keeping model.* The project will cover the cost of an investment of 10 bee families for a group of vulnerable people. The investment will include also a manual honey extractor and specific clothes to manage beehives. The grant will cover the US\$ 6,993 to cover the cost of capital. This activity proven to be profitable, with a B/C ratio of 1.84, IRR of 31.66% and NPV of US\$ 5,847.
- b) *Greenhouse model.* The project will cover the cost of establishment of 0.09 ha greenhouse, which will be targeted at growing of vegetables (mostly tomatoes and cucumbers). The comparative advantage of such model is in seasonal prices, which are much higher than the usual ones. Such greenhouse would require an investment of US\$ 8,280. The IRR is estimated at 42.04%, while NPV would be US\$ 8,684. The B/C ratio for such model is 2.05.
- c) *Drip irrigation model.* The project will cover the cost of investments into drip irrigation equipment to be used on open ground for production of horticultural production. Such approach guarantees a higher productivity and shifting from old methods of irrigation into drip irrigation would increase the yields by 20-25%. Such technology would require an investment of US\$ 8,761. The IRR is estimated at 49.87%, while NPV would be US\$ 6,507. The B/C ratio for such model is 1.32.
- iv. **Provision of Window 2 grants.** The Window 2 will be for grants for CIG of up to 30,000. In comparison with Window 1 grants, these grants will be for larger scale investments, e.g., processing equipment, storage infrastructure, greenhouses, solar drying facility, etc. Window 2 beneficiaries will match the grant with a 20 percent cash contribution. For the financial analysis, the following three indicative models were selected: a) *cold storage model*; b) *vacuum dryer model*; and c) *milk processing facility*.

- a) *Cold storage model.* The model represents a cold storage facility with total capacity of 80 tonnes per year. The benefits will come from purchase of fruits and berries and selling them in between of seasons for a higher price. %. Such facility would require an investment of US\$ 34,956. The IRR is estimated at 65.90%, while NPV would be US\$ 87,096. The B/C ratio for such model is 1.87.
- b) *Vacuum dryer model.* The project will support the cost of establishment of a vacuum dryer facility with total capacity of 180 tonnes/year. Such facility would require an investment of US\$ 32,743. The IRR is estimated at 101.09%, while NPV would be US\$ 93,713. The B/C ratio for such model is 2.17.
- c) *Milk processing facility.* It is expected that the project will support the establishment of a milk processing unit with total capacity of 600 litres of milk per day. The investments costs include renovation of an existing building and purchase of all needed equipment for milk processing. Such facility would require an investment of US\$ 29,292. The IRR is estimated at 24.76%, while NPV would be US\$ 18,203. The B/C ratio for such model is 1.28.
- d) **Productive Alliances.** It is expected this this will facilitate business partnerships between groups of smallholder farmers and private sector actors (e.g. aggregators, processors) on dairy and beef value chains. As an example, the analysis considers the milk collecting center model, which requires the participation of 250 milk producers, bringing an average of 4,5 liters per day in average at the beginning (3 in year 1, 6 in year 6). These 250 producers will typically come from 5 to 10 villages. Such facility would require an investment of US\$ 49,558. The IRR is estimated at 79.04%, while NPV would be US\$ 146,315. The B/C ratio for such model is 1.97.

28. For more details on financial analysis, please refer to Table 1.

Table 1. Summary of financial analysis.

Republic of Tajikistan: Community-based Agriculture Support Programme – Phase II (CASP+)												
FINANCIAL ANALYSIS	CATEGORY	Estimated Investment Costs (US\$)			Annual Net Benefits (US\$)			Annual Inc. net benefits per 1US\$ of Inv.	IRR (%)	NPV (US\$)	Benefit-to-cost ratio	Return to family labour, US\$/day
		CASP+	Beneficiary Contrib.	Total	Without Project	W. Project Full Dvt	Incremental					
CsCAP adaptation investments (typical village)												
	1. CsCAP adaptation investments (typical village) *	72,374	8,042	80,416	11,240	96,199	84,959	1.1	55.43%	352,339	2.56	1.0
CsCAP forestry investments (1ha models)												
	2. Riparian forest plantation (1ha JFM model)	1,037	55	1,091	0	311	311	0.3	33.37%	2,966	3.67	3.1
	3. Riparian forest plantation (1ha LH model)	1,070	56	1,126	0	314	314	0.3	23.26%	2,531	2.77	0.0
	4. Fruit and nut plantation (1ha JFM model)	1,339	70	1,410	0	817	817	0.6	35.86%	2,950	2.91	20.5
	5. Fruit and nut plantation (1ha LH model)	1,357	71	1,428	0	528	528	0.4	28.14%	1,596	2.02	0.0
	6. Pistachio plantation (1ha JFM model)	797	42	839	0	265	265	0.3	25.28%	821	1.84	24.4
	7. Pistachio plantation (1ha LH model)	814	43	857	0	229	229	0.3	22.40%	618	1.62	0.0
	8. Juniper forest plantation (1ha JFM model)	626	33	659	0	63	63	0.1	14.98%	134	1.17	26.2
	9. Juniper forest plantation (1ha LH model)	567	30	597	0	66	66	0.1	15.47%	155	1.21	0.0
	10. Juniper natural regeneration plantation (1ha JFM model)	534	28	562	0	23	23	0.0	15.52%	151	1.22	10.5
	11. Juniper natural regeneration plantation (1ha LH model)	534	28	562	0	26	26	0.0	15.90%	167	1.24	0.0
	12. Saxaul plantation (1ha JFM model)	1,554	82	1,636	0	208	208	0.1	21.73%	201	1.12	42.1
	13. Saxaul plantation (1ha LH model)	1,554	82	1,636	0	210	210	0.1	22.60%	217	1.13	0.0
	14. Agroforestry model (1ha JFM model)	1,053	82	1,135	0	373	373	0.3	31.76%	3,117	3.49	20.8
	15. Agroforestry model (1ha LH model)	1,070	56	1,126	0	376	376	0.3	31.99%	3,133	3.49	0.0
Window 1 indicative grant models (average investment @\$8,000)												
	16. Bee-keeping model	6,294	699	6,993	0	1,626	1,626	0.2	31.66%	5,847	1.84	35.9
	17. Greenhouse model	7,452	828	8,280	0	2,274	2,274	0.3	42.04%	8,684	2.05	12.1
	18. Drip irrigation model	7,885	876	8,761	27,886	31,067	3,181	0.4	49.87%	6,507	1.32	155.8
Window 2 indicative grant models (average investment @\$30,000)												
	19. Cold storage model	27,965	6,991	34,956	0	18,469	18,469	0.5	65.90%	87,096	1.87	0.0
	20. Vacuum dryer model	26,195	6,549	32,743	0	16,460	16,460	0.5	101.09%	93,713	2.17	0.0
	21. Milk processing model	23,434	5,858	29,292	0	6,277	6,277	0.2	24.76%	18,203	1.28	0.0
Productive Alliances (average investment @\$50,000)												
	22. Milk collection center model **	39,646	9,912	49,558	0	37,342	37,342	0.8	79.04%	146,315	1.97	0.0

* Includes a joint typical village level model with Pasture management, Agricultural machinery and Climate Resilient Infrastructure investments

** Beneficiary contribution includes: 10% - beneficiary contribution; 10% - private partner's investment

Economic analysis

ENPV = US\$ 141.6 million; ERR = 21.8% (base-case scenario).

29. The period of economic analysis is 20 years to account for the phasing and gestation period of the proposed interventions. The conservative scenario is presented in the analysis and it is indicative and demonstrates the scope of profitability originated from the conditions prevailing at the time of the preparation (2nd quarter of 2021).

30. Financial prices of locally traded outputs and inputs are converted into economic prices by deducting direct subsidies, taxes and duties and using the conversion factors. Economic prices for imported inputs and outputs and/or traded goods are calculated at their border parity prices. Financial cost of unskilled labour is converted into economic one using a shadow wage rate conversion factor of 0.89. The economic cost of the project is estimated by removing price contingencies and all taxes and duties from the financial cost using, which is generated automatically from COSTAB application.

31. The analysis identifies the quantifiable benefits that relate directly to the activities undertaken following implementation of the project components, or that can be justifiable attributed to the project's implementation.

32. The illustrative models described above have been used for the calculation of the overall benefit stream, on the basis of economic prices. The overall benefit stream has been generating based on the phasing of CsCAPs implementation in 400 villages over the 5-year period and provision of grants aimed at strengthening livelihoods and enhanced resilience through market based approaches (1020 grants through Window 1 and 110 grants through Window 2); and promotion of Productive Alliances (support of 9 models). The conservative average adoption rate of 80% is applied to the analysis based on findings and experience of previous and on-going similar IFAD projects LMDP I and II and consultations with other donor partners working in the country.

33. Given the benefit and cost streams, the base-case ERR of the Project is estimated at 21.8%. The base-case ENPV of the project's net benefit stream, discounted at 6%, is US\$ 141.6 million. This proves that the project is economically viable and justified and recommended for financing from the economic point of view.

34. **GHG analysis.** The GHG analysis was carried out using EX-ACT and GLEAM-i tools. EX-ACT is a land-based appraisal system for assessing a project's net carbon balance – the net balance of tons of CO₂ equivalent (tCO₂eq) of GHGs that were emitted or carbon sequestered as a result of project interventions – compared to a "without project" scenario, while GLEAM-I has a very similar functions but focuses on assessment of intervention scenarios in animal husbandry, feed and manure management. The net carbon balance over a period of 20 years is estimated to be 7.46 million tCO₂-eq (approximately -372,796 tCO₂-eq per year).

35. Since the emission trading scheme is not well developed in Tajikistan, peer countries from the region were analysed in order to value the carbon price. The only country in the region of Central Asia with an emissions trading scheme set on place is Kazakhstan, where the price is US\$1.1/tCO₂-eq¹³. This price is set as a benchmark and used in the base case. The worldwide standard social cost of carbon is US\$21/tCO₂-eq¹⁴, which is considered as a high carbon price scenario in this analysis. The medium scenario is set at conservative rate as a half of worldwide standard (US\$10.5/tCO₂-eq).

36. The World Bank Shadow Price of Carbon Guidance Note was also considered as an option for the analysis, which has low carbon price (starting from US\$41 and evolving over years) and high carbon price (starting from US\$82 and evolving over year). However the

¹³ Kazakhstan emissions trading scheme, 2020 average prices <https://icapcarbonaction.com/en/ets-map?etsid=46>.

¹⁴ Interagency Working Group on Social Cost of Carbon, 2010.

analysis excluded such scenarios due unrealistically high prices for the context of the country.

Table 2: Project Economic Indicators with Carbon Externalities

	Base case (regional benchmark)	Conservative scenario (half of worldwide standard)	High carbon price scenario (worldwide standard)
ENPV (US\$ mln)	141.6	181.8	226.7
ERR	21.8%	28.9%	41.7%

37. 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 ERR is equally sensitive to changes in costs and in benefits. In absolute terms, these changes do not have a significant impact on the ERR, and the economic viability is not threatened by both a 20 % decline in benefits nor by a 20 % increase in costs, since the ERR in both cases remains well above the discount rate. The decrease in benefits by 10% and 20% due to the combined risks of decrease of sale prices and yields accompanied by climate risks (droughts, floods, etc.) would not reduce the economic viability of the project dramatically. A mixed scenario with decrease in benefits by 30% and increase in costs by 20%, would drag the ERR down to 14.85% with ENPV of US\$ 71.9 million. A 70% reduction in benefits, which can happen mostly due to severe climate disaster (severe drought, flood, etc.), would make the project economically unviable, decreasing the ERR down to 5.06% and ENPV to -US\$ 5.2 million. The results are presented in Table 3 below. The results are presented in Table 3.

Table 3: Economic Analysis. Sensitivity.

Sensitivity Analysis							
	$\Delta\%$	Risk		EIRR	NPV (million US\$)		
Base scenario				21.80%	141.6		
Benefits	-10%	Combined risks on sale prices, yields, climate effect (droughts, floods, etc.)		20.11%	120.6		
	-20%			18.27%	99.7		
	-70%	Severe climate risks		5.06%	- 5.2		
Costs	10%	Increase in expenses, input prices and unit costs		20.27%	134.8		
	20%			18.90%	128.0		
Delay 1yr in Benefits		Delays		18.79%	121.2		
Delay 2yr in Benefits				16.38%	101.9		
Carbon price (@US\$10.5/tCO ₂ -eq)		Social cost of carbon is set at @US\$1.1/tCO ₂ -eq in base case, while in other two scenarios it is US\$10.5 and US\$21, respectively		28.90%	181.8		
Carbon price (@US\$21/tCO ₂ -eq)				41.71%	226.7		
Climate Shock every 3 yr	20% Benefits	Repeating climate shocks		21.54%	132.8		
Climate Shock every 5 yr	20% Benefits			21.73%	134.8		
Mixed Scenarios		Costs	10%	Benefits	-10%	18.61%	113.8
			10%		-20%	16.82%	92.9
		20%	-20%		15.53%	86.0	
		20%	-30%		14.85%	71.9	
		20%	-10%		17.28%	107.0	