

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Main report and appendices**

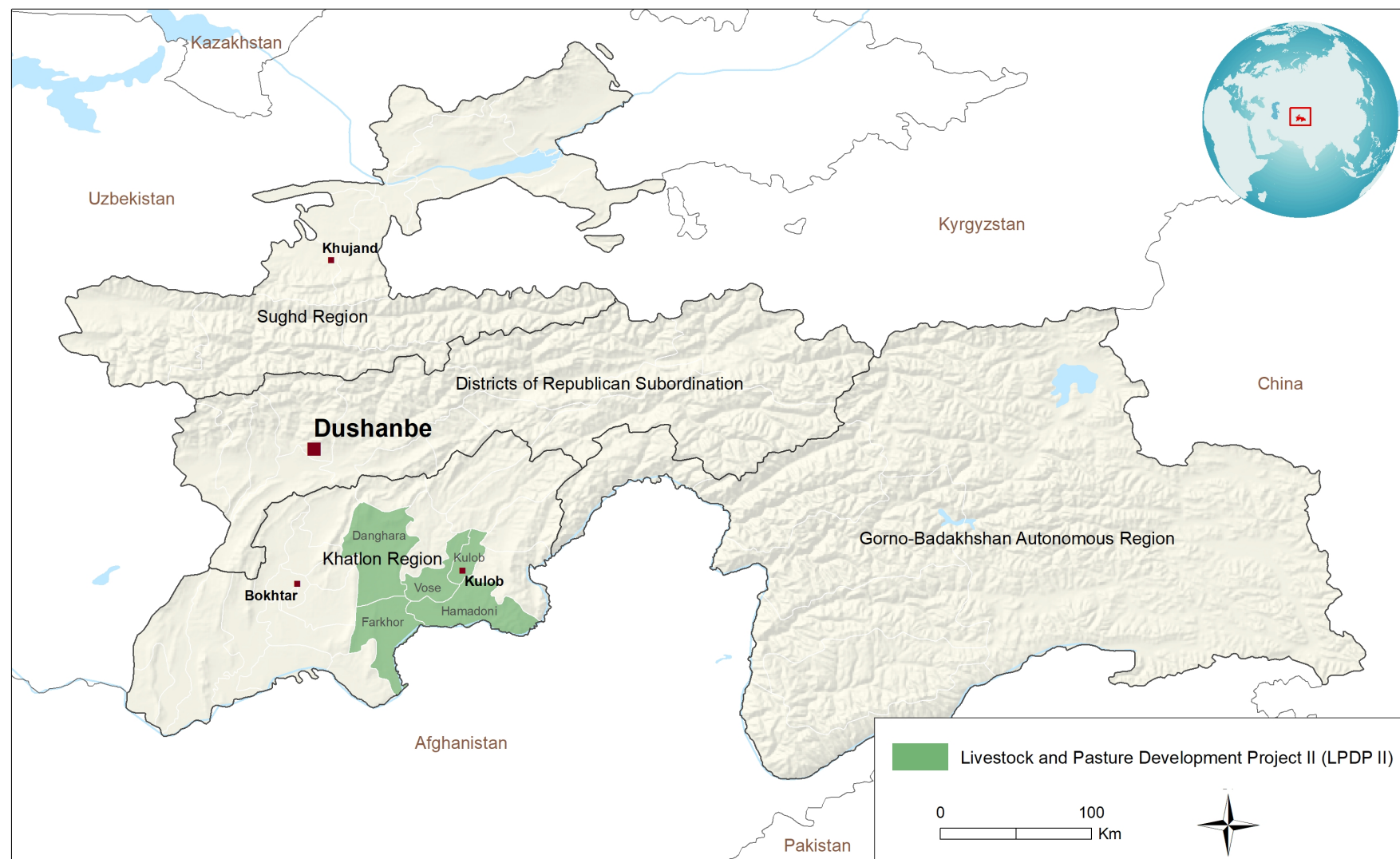
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Near East, North Africa and Europe Division  
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## Map of the Project Area



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

Map compiled by IFAD | 28-05-2020

## Currency Equivalents

Currency Unit	=	TJS
US\$1.0	=	11,43

## Weights and measures

1 Kilogram	=	1000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

## Abbreviations and Acronyms

<b>AWPB</b>	Annual Work Plan and Budget
<b>BDS</b>	Business Development Services
<b>CF</b>	Community Facilitator
<b>CIG</b>	Common Interest Group
<b>CLPMPs</b>	Community Level Pasture Management Plans
<b>EIRR</b>	EIRR Economic Internal Rate of Return
<b>FSC</b>	Food Security Committee
<b>GoT</b>	Government of Tajikistan
<b>HH</b>	Household
<b>IFAD</b>	International Fund for Agricultural Development
<b>IGA</b>	Income Generating Activity
<b>INGO</b>	International Non-Governmental Organisation
<b>JC</b>	Jamoat Council
<b>KLSP</b>	Khatlon Livelihoods Support Project
<b>LPDP</b>	Livestock and Pasture Development Project
<b>LPDP-II</b>	Livestock and Pasture Development Project II
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MOA</b>	Ministry of Agriculture and Environmental Protection
<b>MOF</b>	Ministry of Finance
<b>NDS</b>	National Development Strategy
<b>NGO</b>	Non-Governmental Organisation
<b>PMP</b>	Pasture Management Plan
<b>PIM</b>	Project Implementation Manual
<b>PMU</b>	Project Management Unit
<b>PSC</b>	Project Steering Committee
<b>PUA (or PUU)</b>	Pasture Users Association
<b>PUAB</b>	PUA Board
<b>PUU</b>	Pasture Users' Union
<b>SDR</b>	Special Drawing Right(s)
<b>SVI</b>	State Veterinary Inspection
<b>TA</b>	Technical Assistance
<b>TAU</b>	Tajik Agricultural University
<b>TOR</b>	Terms of Reference
<b>UNIDO</b>	United Nations Industrial Development Organization
<b>US\$</b>	United States Dollar
<b>VO</b>	Village Organization
<b>WIGG</b>	Women Income Generating Group

## Project at a glance

<b>Region</b> Near East, North Africa and Europe Division	<b>Project at Risk Status</b> Not at risk
<b>Country</b> Tajikistan	<b>Environmental and Social Category</b> Moderate
<b>Project Name</b> Livestock and Pasture Development Project II	<b>Climate Risk Classification</b> Moderate
<b>Project ID</b> 2000000977	
<b>Project Sector</b> Livestock	
<b>CPM</b> Mikael Kauttu	
<b>Project Area</b> Districts of Vose, Kulob, Dangara	

## Key Dates

IFAD Approval	Signing	Entry into Force	Mid-Term Review	Original Completion	Actual Completion
12/12/2015	03/02/2016	03/02/2016	08/09/2019	31/03/2021	30/06/2021
		<b>Original Financial Closure</b>	<b>Actual Financial Closure</b>		
		30/09/2021	not available yet		
<b>Date of Last SIS Mission</b>	<b>Number of SIS Missions</b>	<b>Number of extensions</b>	<b>Effectiveness lag</b>		
23/12/2020	4	1	2 months		

## IFAD Financing

as at the time of PCR submission

<b>Loan</b>	<b>XDR Million</b>	6.2 Million	<b>% disbursed</b>	100.0
<b>Grant</b>	<b>XDR Million</b>	9.8 Million	<b>% disbursed</b>	100.0

## Actual Costs and Financing (USD '000)

as at the time of PCR submission

Component	IFAD	Cofinancing	Domestic	Total
	Actual	Actual	Actual	Actual
Institutional Development	1 549		48	1 597
Productivity enhancement and improved animal health	1 755		125	1 880
Pasture Development and Diversification for Vulnerability Reduction	18 169		4 380	22 549
Project Management	1 014		10	1 024
Total	22 487	0	4 563	27 050
<b>Remarks</b>				

## Outreach

<b>Direct Beneficiaries</b>	
Number of HH members	Number of persons receiving services
Estimated total: <b>426 997</b>	Total: <b>426 997</b>
	Males: <b>221 094</b>
	Females: <b>205 903</b>

## Project Objectives

**Agri. Tech. and Prod. Services**

The key objective of component 2 is to increase access to livestock and veterinary services, and fodder supply for smallholder producers (mainly households), resulting in decreased mortality and increased productivity of sheep/goat flocks and cattle herds due to the reduced incidence and prevalence of diseases.

**Climate Chg Adapt & Mitigation**

The key objective for component 3 is to increase access to more productive and climate resilient pasture areas as well as to diversified income-generating opportunities for livestock communities through a sustainable, community-led management of natural resources. The participatory planning process will incorporate both climate-resilient pasture management and animal production/health planning, thus linking the work to be done under both first and second components. The component will strengthen the adaptive capacity, governance and management skills of PUUs and their elected Boards (PUUB) and reduce their vulnerability to climatic stress. This will be done by building understanding within their constituent members of the importance of incorporating climate risk reduction measures within CLPMPs and ensuring the long term sustainability and health of pastures and the restoration of pasture landscapes, thus improving livestock productivity and contributing to reduced feed shortfall and income loss.

**Institutions and Policies**

The key objective of component 1 is to enhance the capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development. This investment will primarily focus on the following national institutions that support pasture development: PUUs and their Boards, the MOA and specifically the Pasture Department (once established), the State Veterinary Inspection Services, and the Tajik Agrarian University (TAU). Although the capacity building will be tailored according to the needs and mandate of these institutions, the Project will keep an open and inclusive approach, and will strive to involve other partners that may benefit from the exercise, as appropriate

**Country Partners**

<b>Executing Institution</b>	Ministry of Agriculture
<b>Implementing Institutions</b>	not available yet

## Project Completion Ratings Matrix

<b>COUNTRY:</b> Tajikistan	
<b>PROJECT NAME:</b> Livestock and Pasture Development Project II	
<b>PROJECT ID:</b> 2000000977	
<b>BOARD APPROVAL DATE:</b> 12/12/2015	
<b>ENTRY INTO FORCE:</b> 03/02/2016	
<b>PROJECT COMPLETION DATE:</b> 30/06/2021	
<b>LOAN CLOSING DATE:</b> 30/09/2021	
<b>IFAD LOAN AND GRANT (USD MILLION):</b> \$22,400,000	
<b>TOTAL PROJECT FINANCING:</b> \$24,194,000	
<b>IMPLEMENTING AGENCY:</b> not available yet	
<b>Criterion</b>	<b>PCR Rating</b>
<b>Project performance</b>	
- Relevance	5
- Effectiveness	5
- Efficiency	5
- Sustainability	5
<b>Rural poverty impact</b>	<b>5</b>
- Households' incomes and assets	5
- Human and social capital	5
- Food security	4
- Agricultural productivity	5
- Institutions and policies	5
<b>Additional evaluation criteria</b>	
- Gender equality and women's empowerment	4
- Innovation	5
- Scaling up	5
- Environment and natural resource management	5
- Adaptation to climate change	5
- Targeting and outreach	5
- Access to markets	4
<b>Partners performance</b>	
- IFAD's performance	5
- Government performance	5
<b>Overall project achievement</b>	<b>5</b>



## Executive Summary

A Project Completion Review (PCR) Mission to the Livestock and Pasture Development Project Phase II took place from 23 August to 3 September 2021. Consultations were organized between the mission and main stakeholders such as the Ministry of Agriculture, the Pasture Amelioration Agency and the Food Security Committee.

The objective of the PCR is to assess and document overall project implementation performance and the results achieved both for learning as well as accountability (vis-à-vis e.g. external stakeholders) purposes. In line with IFAD PCR guidelines, the mission has broadly assessed (i) the relevance of project interventions both at time of design and in today's context, (ii) whether project implementation allowed the project effectively achieve its objectives, (iii) value for money, (iv) sustainability of interventions and (v) potential for scaling up.

LPDP-II entered into force on 3 February 2016. Project financing amounts to US\$ 24,230,00 consisting of an IFAD loan of US\$ 8,700,000, an IFAD DSF grant of US\$ 8,700,000, ASAP grant of US\$ 5,036,000 and domestic co-financing of US\$ 1,794,000. The development goal of LPDP-II is to contribute to the reduction of poverty in Khatlon Oblast. The development objective is to increase the nutritional status and incomes of around 38 000 poor households by enhancing livestock productivity and climate resilience in a sustainable manner. In order to achieve the goal and objective, LPDP-II implemented 3 interrelated components.

The first component Institutional Development aimed at enhancing the capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development. The second component named Productivity Enhancement and Improved Animal Health had the objective to increase access to livestock and veterinary services, and fodder supply for smallholder producers, resulting in decreased mortality and increased productivity of sheep/goat flocks and cattle herds due to a reduced incidence and prevalence of diseases. The third component called Pasture Development and Diversification for Vulnerability Reduction aimed at increasing access to more productive and climate resilient pasture areas as well as to diversified income-generating opportunities for livestock communities through a sustainable, community-led management of natural resources. Component 4 allows for effective project implementation. LPDP-II's implementation arrangements were built on the experience gained by the PMU in fulfilling its responsibility for financial management and procurement under LPDP.

In terms of relevance, the mission concluded that LPDP-II is well aligned with national development strategies as well as policies for agricultural and rural development. It addresses the highly topical issue of degradation of pastures, and resilience of ecosystems in the pressures of climate change. In addition, the initial project design and the vast majority of project funds during implementation are used to address poverty reduction by improving livestock productivity both through the improved delivery of livestock services as well as the improved management of grazing lands. With poverty levels remaining high and the livestock sector and important agricultural sector, currently faced with different types of constraints, the project remained relevant throughout implementation. Given the above, relevance is rated 5 (satisfactory).

The project has three complementary technical components. Overall, project physical targets and output delivery are rated satisfactory. LPDP-II realized outputs on time or even ahead of time. In many occasions, the project was able to achieve or overachieve design targets. Specifically, the mission noted an excellent performance in component 3.1 which was the largest subcomponent. Based on this, as further detailed in the below, the Physical and Output delivery is rated 5 satisfactory.

Efficiency of LPDP is rated satisfactory (5). Financiers' contributions were timely and adequate, quality of project management, partners' performance and quality of implementation support by IFAD were all assessed as satisfactory.

LPDP-II embedded a strategy for sustainability within the project approach. By amending the law on pasture management, it further institutionalized the duties and responsibilities of PUUs. This further harnessed as well as ensured their long-term sustainability from an institutional perspective. Output level monitoring as well as impact assessment results indicate that PUUs membership have a lot of ownership over their institutions with high involvement rates from their communities. Also, PUUs are able to generate resources from communities by offering mechanization services and membership fees. This ensures financial sustainability. Finally, the combination of a reduction in livestock units combined with increases in productivity provides an important entry point for environmental sustainability. Consequently, sustainability is rated 5, satisfactory.

## A. Introduction

1. The Livestock and Pasture Development Project phase II (LPDP-II) was approved on 15 December 2015 and entered into force on 3 February 2016. Project financing amounts to US\$ 24,230,00 consisting of an IFAD loan of XDR 6,2000,000 (US\$ 8,700,000), an IFAD DSF grant of XDR 6,2000,000 (US\$ 8,700,000), ASAP grant of XDR 3,6000,000 (US\$ 5,036,000) and domestic co-financing of US\$ 1,794,000.
2. A Project Completion Review (PCR) Mission of LPDP-II took place from 23 August to 3 September 2021. Consultations were organized between the mission and the Ministry of Agriculture, the Pasture Amelioration Agency, Tajik Agrarian University and the National Veterinary Association. Remote field visits took place on 25 August 2021 where the mission met with male and female smallholder farmers, representatives from the district (Hukumat) and sub-district (Jamoat), Pasture Users' Unions (PUUs) and Pasture Users' Associations (PUAs), service providers, the Project Management Unit (PMU), service providers and staff of the PMU's Regional Office staff. During the mission, the team developed an Aide-Mémoire on which comments were received. The document was discussed with the project stakeholders during a wrap-up meeting on 13 October 2021.
3. The overall objective of the PCR was to assess and document overall project implementation performance and the results achieved both for learning as well as accountability (vis-à-vis e.g. external stakeholders) purposes. In line with IFAD PCR

guidelines, the mission broadly assessed (i) the relevance of project interventions both at time of design and in today's context, (ii) whether implementation allowed the project effectively achieve its objectives, (iii) value for money, (iv) sustainability of interventions and (v) potential for scaling up.

4. The first supervision mission in 2017 was for efficiency reasons, combined with the then still ongoing LPDP project. Supervisions took place in person in 2017, 2018 and remotely in 2020. The MTR took place in 2019. During its second year of implementation. The project had to halt implementation of its activities due to IFAD's suspension of Tajikistan country portfolio, which lasted six months (from December 2018 to June 2019). The suspension had to do with the collapse of the bank, designated by IFAD, where the project accounts were held. This suspension caused a significant disruption in the PMU and, with multiplier effects, delayed the project implementation significantly, much beyond the 6 months. In spite of this the PMU was able to catch up and finalise all activities on time before completion.
5. LPDP-II built on lessons learnt and good practices from the LPDP and implemented them in a different geographical area. In essence, as indicated by the design report, it was a geographical expansion of LPDP but with the integration of climate change issues. It included activities around institutional development, community development, productivity enhancement and dedicated activities for women empowerment.
6. At project design 73.4% of the population of Tajikistan resided in rural areas and 75% of the Tajik population was employed by the agricultural sector. Livestock was a key coping strategy for smallholders in Tajikistan. The sector has grown drastically since independence and rearing livestock is an activity in which nearly half the rural population engaged. Increases in the livestock caused overgrazed pastures which reduced livestock productivity, caused erosion and weakened ecosystems. Other constraints mentioned faced by the livestock sector are lack of technical knowledge and veterinary services, deteriorating breeds, inefficient management of community livestock, shortage of fodder during winter, environmental degradation and poor infrastructure. This was further exacerbated by climate change. In spite of several governance reforms, there was also limited access of smallholders to land, and land tenure was insecure. In responding to these challenges, LPDP-II aimed at reducing poverty in the Khatlon region by undertaking the following interlinked and mutually reinforcing activities: improve the policy framework for governance of pastures that was established under LPDP; establish and strengthen central, district level, and village level institutions for pasture management; facilitate and secure access to land; improve pasture management, carrying capacity and resilience, improve the quality of livestock breeds, and increase household resilience through income diversification.

## **B. Project Description**

### **B.1. Project context**

7. Tajikistan is a landlocked country with mountainous areas accounting for about 93% of the total land area, and a population of 8.2 million. Tajikistan's economy was growing by more than 8% per annum since 2000, but growth slowed from 7.4% in 2013 to 6.7% in 2014 as remittance inflow, equivalent to almost half of Tajikistan's GDP, fell by 8.3%. The country's remoteness, obsolescent Soviet-era infrastructure, deteriorating education and health systems, and lack of Government resources were significant barriers to economic and social development.
8. The poverty level was declining during the last 15 years to 36% in 2013, with extreme poverty reduced to 14%. Poverty was especially high in rural areas, where the population depends mainly on agriculture, livestock and remittances for livelihoods and food security. Tajikistan ranked lowest in Europe and Central Asia on gender equality. Women's status and position in society has undergone a critical change after independence in 1991 with less education, less formal employment and lower wages. Agriculture was the largest employment sector for women, with about 50% of women engaged in the sector in 2010. Women's participation in agriculture is characterized by seasonal and low-paid or unpaid positions. In the livestock sector women were mainly responsible for the care of animals within the homestead and undertake much of the work of feed preparation, milking, and cleaning. Food insecurity and malnutrition is high in poor households, especially among children according to the project design document. It indicated that more than 80 percent of interviewed households under the LPDP-II Baseline Survey suffered from food insecurity and shortage of money for food throughout the year. Chronic malnutrition affected almost 30 percent of children under five. Improvement in livestock productivity would support poor households in dealing with food security issues and enhance their nutrition status. Despite the relative decrease in poverty there is still a significant number of people suffering from chronic malnutrition. During implementation, this is actually contested by IFAD impact assessment results. The impact assessment stated that over 90% of the target group was food secure, which could indicate that the design made a wrong assumption.
9. Tajikistan became an independent sovereign nation on 9 September 1991 following the disintegration of the Soviet Union. Reforms took place ever since in order to introduce a more market led system. One of them included the land ownership reform leading to three types of farm: (i) Large state owned farms (approximately 8% of country's arable land); (ii) Private dehkan farms (approximately 60% of arable land); (iii) Smallholder producers – household plots (approximately 32% of country's land). The individual households, despite their small size, were responsible for over 50% of country's agricultural production and in some agricultural sub-sectors their contribution goes up to 80-90% (milk, meat, vegetables etc.). All land holders had long-term land lease entitlements often tradable and inheritable. It is worth mentioning that despite long-term land use certificates issued to land holders the land still remains in the ownership of the state and technically can be always revoked if needed for "public use and needs".

### **B.2. Project objectives**

10. The goal formulated for LPDP-II was to contribute to the reduction of poverty in Khatlon Oblast. The development objective was to increase the incomes, resilience and nutritional status of around 38 000 poor households by enhancing livestock productivity and climate resilience in a sustainable manner. The outcomes expected from the LPDP-II included the following: (i) enhanced capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development; (ii) increased access to livestock and veterinary services, and fodder supply for smallholder producers, resulting in decreased mortality and increased productivity of sheep/goat flocks and cattle herds due to a reduced incidence and prevalence of diseases; and (iii) increased access to more productive and climate resilient pasture areas as well as to diversified income-generating opportunities for livestock communities through a sustainable, community-led management of natural resources.
11. Main outputs of the project include for component 1 were: (i) PUUs enabled to develop and implement climate risk-mitigation community pasture plans incorporating needs and priorities of poor and women; and (ii) public institutions involved in pasture management strengthened. For component 2 the main components were: (i) capacity for sustainable and efficient livestock production built, and (ii) private vets provide animal health and production services on a sustainable basis. The main outputs for component 3 were: (i) resilient and sustainable investments prioritized in CLPMPs completed and functioning, and (ii) alternative income-generating activities supported to enhance risk-coping.
12. The main challenges that the project was setting out to address, and thus are explicitly included in the development goal and objective are reduction in malnutrition and increasing incomes and resilience of the livelihoods of the poor. Livestock productivity, due to its importance in the target area for all of these dimensions, was chosen as the main entry point to achieve the objective and goal. Constraints to livestock productivity are an (i) inadequate fodder base (especially winter fodder through pastures as well as seeds to cultivate fodder) leading to high livestock mortality rates and low yields of milk and meat, (ii) inadequate access to high quality and reliable animal health services and (iii) the absence of a well-functioning network of veterinary and extension services and deteriorating breeds. Consequently, through multiple outputs of LPDP-II aimed at delivering at either improving pasture productivity in an ecological manner, improving the fodder base and livestock services. Income generating activities are offered to enhance risk-coping.
13. The LPDP-II continued the promotion of a substantial complex of innovative institutions that were introduced by LPDP dedicated to pasture and natural resource management i.e. a) establishment of 197 Pasture User Unions at village level, b) creation of Pasture User Associations at district level, c) strengthening of the Pasture Management Trust at central level rooted in d) relevant legislation such as the Pasture Law. The PUU proved itself as a major innovation that with low cost effectively converts the village-controlled natural resources and pastures in the country under sustainable management, and presents a platform for subsequent successive work on natural resource and pasture management. Since it was first introduced by IFAD, it has been widely adopted by the government and other donors.
14. The design of the project originally meant to address the pressures on pastures by improved access to land, and better pasture rotation which directly reduce degradation and increase pasture productivity. The MTR observed however that these efforts may not be sufficient to put an end to the degradation process, since the global trend in livestock inventories shows a constant increase of the last decades, and the increase in stock rates eventually in the long run will overtake the improved pasture productivity and commence a new trend of degradation. The MTR therefore recommended the PMU to intensify training of the PUUs highlighting a) the need to reduce pasture pressure in order to salvage carrying capacity and resilient ecosystems, and b) the productivity benefits of a shift towards systems that are more intensive, and less dependent on pasture for feeding their animals, which implies working on increasing production and utilization of cultivated fodder, and a better crop-livestock integration.

### B.3. Implementation modalities

15. The Project Management Structure of LPDP-II was to a large extent taken over from LPDP. Project implementation was guided by implementation guidelines that were prepared in October 2016 and subsequently approved by IFAD. The implementation structure consisted of several state, private, and community institutions which were engaged by and/or formed under the project as follows:
  - **Ministry of Finance** who is the main recipient/borrower of project resources.
  - **Ministry of Agriculture (MOA)** with the overall responsibility for management of the project on behalf of the Government of Tajikistan.
16. **Project Steering Committee (PSC).** The PSC provided policy guidance and facilitated coordination with other development programmes and projects and maintained oversight on the Annual Work Plan and Budget (AWPB). It was formed under the LPDP project and subsequently also provided oversight to LPDP-II. In the early stages of implementation, the PSC covered both the implementation of LPDP and LPDP-II. The Deputy Minister of Agriculture for Livestock was the Chairman of the PSC. Its other members included senior representatives of the Ministry of Finance, Ministry of Agriculture, the State Committee of Investment and State Property Management, the Tajik Agricultural University the State Committee for Women's Affairs and Families and members of the private sector. The PSC has been meeting every six months to review Project progress and approve its annual work plan and budget, including the annual financial statements.
17. **Project Management Unit (PMU).** The Project Management Unit (PMU) was created as a state entity in the Ministry of Agriculture and has been implementing IFAD investments in the country for almost 10 years. In the early stages of implementation, staff members worked for both LPDP as well as LPDP-II. The majority of staff members continued working for LPDP-II when LPDP closed. The PMU was established in Dushanbe under the supervision of the MOA taking responsibility for effective implementation arrangements, start-up activities, proper disbursement, procurement, contracting of project partners, financial management, monitoring, evaluation and knowledge management, communications and dissemination. It has been responsible for overall project progress reporting, liaising with other agencies involved in the project and arranging for supervision

by IFAD missions. Additional responsibilities of the PMU included financial management, preparing consolidated financial statements and engage services of specialized agencies for auditing, Management Information System (MIS) and setting-up of accounting system, training and capacity building and the function of Community Facilitator. Just as under LPDP, the PMU had a regional office in Kulob that housed half of the PMU staff such as district officers. It allowed to liaise with local government and project beneficiaries.

18. **Community Facilitator (CF).** Mobilisation and capacity building of community organizations were implemented by the Community Facilitator (CF). Two NGOs were contracted under the Project as community facilitators. Based on guidelines developed under LPDP, CF formed Pasture User Unions. Afterwards, they supported the planning process, implementation and monitoring of the priority investments. CFs also worked with the communities to establish and strengthen Community Interest Groups (CIGs) and Women's CIGs (WIGGs).
19. **Pasture institutions.** Some 197 PUUs were established in accordance to the relevant new legislation on pasture and project community participation guidelines. PUU members comprised all farm households (one member representative per each household), with and without livestock, who expressed their interest in joining the group. At least 80% of a project needed to be present in order to establish a PUU. Each PUU elected a Board (PUUB) at a general village meeting where a third of the PUUB members were required to be women. PUUs were Project's focal points and were instrumental for introducing the Project to the communities and its participatory identification of the target beneficiaries, as per project design criteria. Through facilitation by the project and in collaboration with Hukumats and Jamoats, pasture land was made available to PUUs under agreement or lease. PUUs vision and long-term strategy for pasture management, were reflected in Community Level Pasture Management Plans (CLPMPs). CLPMPs included a pasture management plan and investment plan. They were developed under the close supervision of the project and included the views of all community members. Based on the size of the community (and thus the membership of the PUUs), CLPMPs received a financial allocation from the project which it could use to operationalize the strategy by purchasing material or improve pasture infrastructure. Further to lessons learned from LPDP and given the adverse impacts of climate change, pasture institutions under LPDP-II increased their climate focus. Besides training on general management and pasture management, PUUs received training on environmental and natural resource management. CLPMPs also increased their focus on increasing pasture management by financing more pasture infrastructure (e.g. bridges, boreholes, roads, cattle tracks, wells).
20. **Common Interest Groups (CIGs) and Women Income Generating Groups (WIGGs).** LPDP-II included specific activities to economically empower women, provide alternative income generating activities and Smallholder households interested in participating in livestock development activities were organized by PUUs into 173 CIGs and 261 WIGGs. Specifically, CIGs were formed according to each individual project activity, i.e. fodder promotion and production, sheep breeding, private veterinary services and women's income generating initiatives. While WIGGs were formed in the framework of Income Generation Activity packages (i.e. poultry, small ruminants, beekeeping, milk and wool processing). These groups were duly formed according to the procedures and targeting criteria set at design.
21. **The Tajik Agrarian University (TAU)** was founded in 1934 and is the main agricultural university in Tajikistan. Support to the TAU aimed at developing the overall academic environment around livestock management, veterinary services and pasture management in Tajikistan. To that end, LPDP-II supported the TAU with the physical rehabilitation of university facilities. Students with outstanding academic results were supported with scholarships. Project funds were also used to developed a dedicated bachelor and masters on pasture development. Finally, technical assistance was deployed to improve learning methods, organizational capacities and curricula.
22. **Pasture Meliorative Trust (PMT)** under the Ministry of Agriculture is an agency and the principle department responsible for pasture management throughout Tajikistan. The PMT was the department responsible for developing and amending the pasture law with support of LPDP-II. In order to guide this process, four LPDP-II specialists, including the PMU legal/policy team and GIS specialist, worked closely with the trust and guided PMT specialists through this process. Also, PMU specialists provided training to PMT staff on administrative and technical subjects related with the PUUs. Finally, under the Project, the PMT's main buildings were renovated, and the Trust was also provided with office equipment and two vehicles.
23. **Food Security Committee (FSC)** was established in 2017. It is the central executive body of the government carrying out the special executive, controlling, allowing and other functions established in the field of veterinary science, phytosanitation and quarantine of plants, protection of plants, seed farming and breeding case. The FSC took over the mandate from the SVIS and became a key implementing partners under component 2.2. Support extended to the FSC included an institutional assessment of Tajikistan's animal health system, the provision of support to 60 vets employed by the FSC and provision of 60 veterinary packages, the provision of training and laboratory equipment.
24. **Hukumats** (district administration) and **Jamoats** (sub-district administration). Hukumats representatives had the central role of establishing the PUUs and overseeing their function while Jamoats were more closely involved in mobilizing communities for the PUUs establishment, CIGs and WIGGs formation and in monitoring project activities.

## B.4. Target groups

25. The primary target group of the LPDP-II were: (i) smallholder livestock households; (ii) private veterinary service providers and small scale entrepreneurs with the potential to provide services to households and smallholder farmers; and (iii) women headed households and women belonging to poor households. It was expected that all project beneficiaries were living below the US\$ 2 per capita per day which was the case for 50% of the Khatlon region at the time of design.
26. Project design recognized that women's equality and empowerment vis-à-vis men is still lagging behind with Tajikistan ranking among the lowest on gender data comparative data of all the Central Asian states. Agriculture employed most women in the country. However, women's participation in agriculture was characterized by seasonal, low-wage, and low-paid or unpaid

positions. Addressing gender in the Project aimed at building assets at the individual, household, and community level through reducing vulnerability and increasing the opportunities of men, women, boys, and girls. Women in Khatlon were provided with income generated activities to build an asset base and economically empower women. In addition, the project pro-actively included women in PUU's requiring that 30% of the members of the PUU's executive organ, the pasture committee, be women. The reason behind this was that by increasing women's voice in these organizations, they would advocate for women's empowerment and further sensitize societies about women taking up leadership positions.

27. LPDP-II project design took into account the following targeting approach: (i) geographical targeting for selection of the Jamoats with the potential for livestock and pasture development; (ii) selection of villages along the poverty data profiles and based on 11 specific targeting criteria as defined in project design; (iii) household targeting for selection of households which meet the Project's poverty and gender criteria; and (iv) gender targeting for selection of women for specific Project activities through fixing special quotas for their inclusion. A participatory approach at the village level ensured the inclusion of eligible households who meet the poverty, capacity and the gender criteria.

## C. Assessment of project relevance

28. LPDP-II is well aligned with national development strategies as well as policies for agricultural and rural development. It addresses the highly topical issue of degradation of pastures, and resilience of ecosystems in the pressures of climate change. In addition, the initial project design and the vast majority of project funds during implementation are used to address poverty reduction by improving livestock productivity both through the improved delivery of livestock services as well as the improved management of grazing lands. With poverty levels remaining high and the livestock sector and important agricultural sector, currently faced with different types of constraints, the project remained relevant throughout implementation. Given the above, relevance is rated 5 (*satisfactory*).

### C.1. Relevance vis-à-vis the external context

29. **Alignment with GoT Policies and Objectives:** At the time of project design, the GoT reflected its development goals in the 10-year National Development Strategy (NDS) for 2006-2015. The strategy aimed at promoting sustainable growth, improving public administration and development of human resources. LPDP-II is well aligned with the overall goals in the strategy around governance, poverty reduction, environment, and institutional development.
30. LPDP-II investments in the PUU's occur in the framework of the "Pasture Law" which was first adopted in 2013, supported by the LPDP. Based on the methods, lessons learned and recommendations from LPDP, LPDP-II supported an update of the 2013 Pasture Law which was adopted in 2019. The 2019 revision of the Pasture Law, was a major achievement of the project. The renewal and reinforcement of this legal framework reinforced and secured the achievements at field level, especially the establishment of PUUs. The policy dialogue process deployed with the support of the project was very inclusive and involved national and local authorities, development partners, but also local communities. The main changes brought by the revised law are related to rights and duties of parties in lease arrangements, protection of pastures, payment and utilization of renting fees and definition of rights and duties of PUUs.
31. Other objectives included in the NDS that were operationalized by LPDP-II are (i) increasing the productivity of the agricultural sector, (ii) rebuilding and rehabilitating irrigation systems, (iii) increasing and improving the production of certain type of agricultural products such as animal products, (iv) ensuring equal access for men and women to resources in the entrepreneurial sphere and (v) the strengthening of institutional potentials with a view to promoting environmental sustainability. Finally, LPDP-II was also aligned with specific agricultural development strategies from the Concept for Agrarian Policy from 2008-2015 such as (i) diversification of agricultural production and (ii) development of rural businesses, including processing.
32. **Challenges and opportunities for poverty reduction:** The project addresses two key issues for rural development: poverty and resilience of ecosystems under pressure from climate change and overgrazing of livestock.
33. Increase in productivity of livestock and improved pasture management was identified as the project's entry points for poverty reduction as the productivity of livestock maintained by the target group was suboptimal and has significant potential for improvement. Target groups were further threatened by the adverse effects of climate change. According to the LPDP Baseline Survey 98% of households owned some type of livestock. The average number of livestock of the sampled households engaged in livestock production comprised three cattle, two sheep, three goats, and seven chickens per household. Poorer households in rural areas generally depend on livestock and cropping for income generation and hence raising the productivity of both was therefore seen as a major opportunity for poverty reduction. LPDP-II sought to address this by dedicating the bulk part of its project financing and efforts to improving livestock productivity through (i) improved access to animal health services, (ii) improving access to fodder and (iii) improving breeds.
34. Limited access to pastures and degradation of pastures were also among key causes of poverty identified at design stage. Ownership of land was a key determinant of household status and productive potential. Although the GoT has been implementing a programme of land reform, at the time of design few results have been booked in terms of providing equitable and secure land-use rights to farmers, especially poor households. The design set out to secure improved access to pastures for PUU's through land certificates and agreements, (out of which 84 certificates and 169 agreements were achieved), and improved management of pastures so as to increase their carrying capacity and reduce vulnerability to climate change.
35. **Priorities and needs of target groups at design and completion:** Poverty and food insecurity, especially in rural areas, remained one of the major issues requiring follow-up by international development partners. The Khatlon region housed

approximately 1/3 of the country's population (some 2.99 million people) and a substantial part of the country's herds of livestock (about 864 thousand heads of cattle and almost 2 million heads of sheeps and goat). Khatlon had 1.2 million hectares of pasture which constituted 32% of the country's summer pastures and 82% of the country's winter pastures. Specifically, the final *Jamoats* selected to partake in LPDP-II have not less than 80% less livestock in the area, have appropriate access to pastures and sufficient carrying capacity of the pastures. Towards project completion, the population in the Khatlon region slightly increased to 3.3 million people. One of the underlying reasons for this is likely the COVID-19 pandemic that led to a high number of overseas workers to return back home. These workers were in need of income generating activities and the agricultural/livestock sector provided a viable entry point for them. Overall, the agricultural and livestock remained important economic sectors throughout implementation.

36. As for women empowerment, project design indicates that female empowerment rates in Tajikistan are among the lowest in all of Central Asia. At completion, this remains to be the case with a Gender Development Index (GDI) of 0,823 far below the GDI of peers like Kyrgyzstan 0,957 and the average of Central Asian Countries standing at 0,953. Hence, interventions are required to address the issues around the voice of women in rural institutions, economic empowerment and equitable workload.
37. Also, the Khatlon region, especially the Eastern and the Central part of the region show higher vulnerability to climate change which has an impact on livestock productivity. Increasing temperatures for example pose higher challenges on animal health and changing precipitation patterns require for different livestock feeding patterns. Concluding, the activities implemented by LPDP-II remained relevant throughout implementation.
38. Project design indicate that food security remained a key issue in the project area and that is why increasing food security is included in the project objectives. However, no specific activities are included to actually address food security and the project design assumed that increased productivity would also lead to increased auto-consumption by the target group. The IFAD impact assessment however indicated that food insecurity actually was very low at the time of project completion which could indicate that the project design made wrong assumptions or that food insecurity was eradicated during implementation. With a 15% increase in food security due to LPDP-II, productivity increased and income increases generated during implementation probably lead to a reduction in food insecurity.

## C.2. Internal Logic

39. The project design report, which was consequently reflected in the project goals and objectives, seeks to reduce poverty in the Khatlon region that remained to be high at the time of project design. Livestock is a key agricultural sector in the Khatlon region and it has an important impact the incomes of rural households as well as their food security/nutritional status. In the same time as the productivity of the sector remained low, the design identified a range of interlinking activities with significant potential to increase productivity while also increasing resilience of livelihoods: improved access to land, improved pasture management, improved fodder production, improved breeds, improved veterinary services, backed up by improved institutions and policies at village, district and central level.
40. Livestock rearing relied mainly on grazing. Communal pastures used for grazing are unfortunately underperforming due to overgrazing mainly caused by poor governance. The project design observed a decline in pasture performance in the project area due to environmental degradation caused by overgrazing and adverse effects of climate change. Livestock productivity was further hindered due to household's limited access to alternative fodder resources (due e.g their high costs and lack of access to quality seeds) and low technical knowledge of livestock rearing.
41. Consequently, LPDP-II set out to address this issues in an effort to reduce vulnerability of pasture communities vis-a-vis the increasing threat posed by changing climate conditions and ensuring livestock producer households maximize their returns while ensuring the sustainable management of pastures. The 2013 pasture law, adopted with support of LPDP when in the years before Tajikistan faced an increase in livestock heads and further degradation of pasture quality created the legal concept of PUU, and thus formed the institutional framework for project interventions. The 2019 revision of the Pasture Law, was a major achievement of LPDP-II. The renewal and reinforcement of this legal framework reinforced and secured the achievements at field level, especially the establishment of PUUs. The policy dialogue process deployed with the support of the project was very inclusive and involved national and local authorities, development partners, but also local communities. The main changes brought by the revised law are related to rights and duties of parties in lease arrangements, protection of pastures, payment and utilization of renting fees and definition of rights and duties of PUUs.
42. The present pasture law provides the main legal framework for project implementation by establishing PUUs, which is the key instrument for organizing the management of the pastures. The main bodies of the PUU comprise its executive body, the pasture committee with min. 30% representation by women, and the assembly whose decisions require participation of 80% of the households of the community. Upon establishment, the project supported the pasture committee and assembly of each PUU to develop a Community Livestock and Pasture Management Plans (CLPMPs), through which the community:
  - take stock of their productive assets (pasture land and carrying capacity, livestock, infrastructure, equipment),
  - identify the challenges in terms of productivity and resilience of pastures and ecosystems,
  - decide about investment priorities using the community development funds made available by the project as well as beneficiary contribution,
  - establish intensive pasture rotation schedules for community livestock so as to rehabilitate degraded pasture areas, and improve the carrying capacity of the pasture areas that are in moderate/good condition.
43. Vulnerability of certain members of the society as well as gender inequality were main consideration when implementing the CLPMPs. During the community facilitation stage, vulnerable households (including women and women headed households) were identified and organized in Women Income Generating Groups (WIGGs) and Common Interest Groups (CIGs). With a view to increasing the incomes of and advancing the most vulnerable parts of the communities, these groups received special project

support such alternative fodder resources, improved breeds or alternative income generating opportunities. Furthermore, to address the lack of technical knowledge on livestock management, both directly in communities as well as at national level, the project aimed at making the veterinary services more efficient by privatizing them and advancing the academic framework.

44. Overall, the project presents a very strong internal logic. It implemented/executed the provisions of pasture law, placing the overall responsibility at community level and thus paving the way for strong community ownership. Whilst doing so, it provided dedicated financial support to both improve the productivity of the pasture as well as for the distributed fodder resources and improved species. Animal health was implemented through a separate component. Hence, three underlying aspects of livestock productivity (feeding, animal health and improved genetics) were addressed by the project. Due attention was provided to the more vulnerable segments of society (such as women and poor people) by designating project fund towards them and actively engaging them in the plans.
45. As, according to the project design report, LPDP-II is in essence a geographical expansion of LPDP, it was able to make efficient use of methods and interventions developed under LPDP. Project staff remained largely the same and there was even a brief period that they were implementing both implementation methods could be seamlessly taken over from LPDP to LPDP-II. It presented an excellent starting point for the successful implementation of an IFAD financed project.

### C.3. Adequacy of design changes

46. Overall, few changes were made from the initial design process to implementation and for example, no components were dropped or added to the design. Changes to the initial design, mostly occurred further to implementation relates issues not allowing design plans to fully materialize.
47. The design of the project originally meant to address the pressures on pastures by improved access to land, and better pasture rotation which directly reduce degradation and increase pasture productivity. The MTR observed however that these efforts may not be sufficient to put an end to the degradation process, noting the trend in livestock inventories shows a constant increase during the last decades, and that the increase in stock rates in the long run may overtake the improved pasture productivity and commence a new trend of degradation. The MTR therefore emphasized the need to intensify training of the PUUs on a) the need to reduce pasture pressure in order to salvage carrying capacity and resilient ecosystems, and b) the productivity benefits of a shift towards systems that are more intensive, and less dependent on pasture for feeding their animals, which implies working on increasing production and utilization of cultivated fodder, and a better crop-livestock integration. While such trainings had already been implemented earlier, the intensification of them brought fruit: the completion survey results indicate a significant decrease in the stock rates, combined with a sharp increase in productivity by completion.
48. Component 2.2 aimed at privatizing the state veterinary services with the objective of making them more efficient. Back in the Soviet time there was a wide, well established and well functioning public network of livestock extension and training services available to farmers. After independence, the public veterinary system collapsed due to the collapse of collective and state farms and lack of budgetary resources. Extension and training services to farmers were mostly provided at the expense of donor projects through a network of local and international NGOs. Hence LPDP-II wanted to establish a private veterinary services systems reasoning that additional monetary incentives that can be gained by private vets, might lead to an increase of vet services for farmers.
49. An agreement was made with the State Veterinary Inspection Services (SVIS) to support the privatization of the vet services under LPDP-II. During implementation however, the SVIS was resolved and its mandate/activities were taken over by a newly established Food Security Committee. With FSC reflecting on its mandate and initially aiming at improving state veterinary services, the ambition of privatizing vet services was halted. Hence, instead of supporting private veterinarians, LPDP-II supported public veterinarians.
50. According to LPDP-II design the project was supposed to support 180 PUUs. However, during implementation, the PMU managed the project efficiently which freed up additional funds for project implementation. At MTR it was hence decided to increase the number of PUUs from 180 to 197 PUUs. IFAD commended this decision as increasing the number of PUUs meant that the most impactful activity was scaled up. Project funds were managed and invested directly back in communities through PUUs. Consequently, the outreach number increased from 38,000 people to 51,391 people during implementation and changes occurred in the budget expenditure per component as well as per expenditure category, significantly increasing the impact of the project.
51. Table 1 presents the fund utilization per component and summarizes the initial allocation as per the appraisal as well as the actual expenditure. Under expenditure in the project management component related to savings generated due to efficiencies. The increase of expenditure under component 3 are costs related to the CLPMP community grants and diversification grants triggered by an increase of the PUUs established under component 1. Expenditure by expenditure category also reflects this change, with an over expenditure of the CLPMP grants of 124% and of the diversification grants of 115%. In terms of the expenditure per category, one of the major deviations related to the design is the over expenditure in the community grants and diversification grants category also triggered by the increase of PUUs/CLPMPs established.

**Table 1. Fund Utilization per Component (USD) and Financier (Up to 30 September 2021)**

Components	IFAD Loan			IFAD Grant			ASAP Grant			Government			Beneficiaries			Total		
	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
1. Institutional Development	-	-	-	1 313	1 402	107%	153	147	96%	126	36	29%	269	12	4%	1 861	1 597	86%
2. Productivity Enhancement	-	-	-	1 871	1 755	94%	-	-	-	190	4	2%	184	121	66%	2 245	1 880	84%
3. Pasture Development	8 700	8 712	100%	4 002	4 506	113%	4 882	4 951	101%	23	2 816	12243%	895	1 584	174%	18 502	22 549	122%
4. Project Management	-	-	-	1 514	1 014	67%	-	-	-	108	10	9%	0			1 822	1 024	63%
<b>Total</b>	<b>8 700</b>	<b>8 712</b>	<b>100%</b>	<b>8 700</b>	<b>8 678</b>	<b>100%</b>	<b>5 035</b>	<b>5 098</b>	<b>101%</b>	<b>447</b>	<b>2 865</b>	<b>641%</b>	<b>1 348</b>	<b>1 697</b>	<b>125%</b>	<b>24 230</b>	<b>27 050</b>	<b>112%</b>

## D. Assessment of project effectiveness

52. The project has three complementary technical components. Overall, project physical targets and output delivery are rated satisfactory. LPDP-II realized outputs on time or even ahead of time. In many occasions, the project was able to achieve or overachieve design targets. Specifically, the mission noted an excellent performance in component 3.1 which was the largest subcomponent. Based on this, as further detailed in the below, the Physical and Output delivery is rated 5 Satisfactory.

### D.1. Physical targets and output delivery

#### Component 1 – Institutional Development

53. The key objective of this component was to enhance the capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development. Two subcomponents, aiming at the development of community organizations and advancement of a new pasture law and institutions which serves as a foundation for decentralization reforms in pasture management form component 1. In total US\$1,861,000 was allocated to the implementation of the component and of which US\$1,595, 000 (86%) was disbursed on 1 September 2021.

#### Sub-Component 1.1: Development of Community Organizations

Building on the approach of LPDP, component 1.1. mainly focused on establishing community organizations such as Pasture User Unions (PUUs), Common Interest Groups (CIGs) and Women Income Generating Groups (WIGGs). These organizations then received additional support or training under other components. The different organizations were established with the assistance of a local Service Provider who adhered to pre-set guidelines in order to establish groups and elect their governance body.

54. The subcomponent substantially over performed above design targets. PUUs were the means for the implementation of most project activities and the main channel for project support. It was foreseen in project design that 180 PUUs would be formed and the project target of 180 PUUs were legally established by 2017. In the course of implementation the PMU was able to accumulate savings, which at MTR were repurposed so as to increase the outreach to 197 PUUs (109% achievement). In total, 1632 (target: 126 – 129,5% achievement) people served as PUU board members of which 489 (or 30%) women. PUUs constituted of 51,391 people (target: 38,000 -135.24% achievement) of which 4,343 were women headed households.

55. PUUs have access to pastures through agreements or certificates. In total, 84 certificates (target: 80 – achieved: 105%) and 169 agreements (target 180 - achieved: 93%) have been provided to the PUUs throughout project implementation. As some 53 PUUs obtained both certificates as well as agreements, all PUUs have access to grazing land for their livestock. Agreements provide a PUUs with 10 year long access to a pasture. Certificates provide PUUs lifelong access to pastures which is more favourable for PUUs. Hence it is commendable that 31% of the land use agreements were provided under a certificate. Overall, the majority of the agreements and certificates were provided at the early phases of implementation allowing the PUUs to fully develop their pastures. Table 2 shows the type of agreements provided and in which year they were provided.

**Table 2. Land agreements and certificates per year**

	<b>Agreements</b>	<b>Certificates</b>
<b>2017</b>	<b>135</b>	<b>35</b>
<b>2018</b>	<b>137</b>	<b>46</b>
<b>2019</b>	<b>159</b>	<b>58</b>
<b>2020</b>	<b>167</b>	<b>83</b>
<b>2021</b>	<b>169</b>	<b>84</b>

56. In order to assure that the PUUs were running in a good manner, 661 trainings (target: 326 – 192% achievement) were organized on a variety of topics. 12,675 participants took part in trainings of which 32.9% were women. Trainings includes topics like livestock breeding, the development of CLPMPs, pasture management, Groasis Waterboxxes, livestock breeding and health and fodder. Other trainings were provided directly to PUU boards. 214 PUU board members of which 84 were women benefitted from training on financial management and sustainability, business plan development as well as climate change.



57. Besides the PUUs, CIGs as well as WIGGs were formed under component 1.1. In total, LPDP-II established 173 CIGs for crop production (target: 150 –117% achievement) with 3586 members receiving 93,4 ton of fodder seeds (alfalfa, barley, sainfoin, fodder beet and corn) and 488 ton of mineral fertilizers (carbamide and Superphosphate). Some, 1,134 hectares land was cultivated with these seeds. Also, the project established 146 groups for small ruminants (target: 50 – 292% achievement) with 9413 members. In addition, 2011 male rams of the Hissar breed were provided to these groups resulting in 54 921 heads of improved breed lambs during the implementation period.
58. Some 261 WIGGs (target: 22- achievement 1189.36%) with 1559 members were formed. These consisted of 8 groups (87 members) for milk processing, 12 groups (120 members) for the cultivation and processing of rosehip, 167 groups (1057 members) for turkey breeding and and 74 groups (295 members) for beekeeping groups.

#### ***Sub-Component 1.2: Advancement of Policy and Legal Framework and Strengthening National Institutions***

59. Under this sub-component, the project provided support to several institutions, including Pasture Meliorative Trust (PMT) and the Tajik Agrarian University (TAU), but also supported policy dialogue and formulation, with a specific focus on the Pasture Law, to ensure sustainability and advancement of pasture management reform in Tajikistan.
60. The revision of the Pasture Law through the PMT, is a major achievement of the project. The renewal and reinforcement of this legal framework strengthens and secures achievements at the field level especially by providing a legal status to PUUs. The policy dialogue process deployed with the support of the project was inclusive and involved national and local authorities, development partners, heads of districts and villagers. The main changes brought by the revised law relate to rights and duties of parties in lease arrangements, protection of pastures, payment and utilization of renting fees and definition of rights and duties of PUUs. Besides, the project prepared and passed a five-year strategy on improving pasture management in adaptation to climate change following the revised Pasture Law.
61. The project has significantly reinforced the technical capacities of the PMT through the secondment of technical assistants and training from the PMU legal/policy team and GIS specialist, provision of logistical equipment, the provision of 2 vehicles and renovation of premises. It has also strengthened its institutional structure by revising the internal charter and creating a new pasture management department. In partnership with TAU, eight selected graduates could intern at PMT, gaining practical knowledge and providing administrative support. Afterwards some interns were permanently employed by the PMT.
62. The project has made a substantial investment in TAU to support the development of Bachelor's and Master's degrees in Sustainable Pasture Management in the Faculty of Agronomy. In 2018, 15 students started with this bachelor degree and the number continues to increase. Project support financed scholarships for students across a group of four faculties. Some 60 students received scholarships for the TAU across these four faculties. Classrooms and laboratories have been renovated and supplied with modern equipment. In total, 3 desktop computers, 1 laptop, 1 LED TV, 3 webcams, 14 tables, 26 chairs, 2 armchairs, 1 Wi-Fi router and 1 air conditioner were provided to TAU. Finally, Syllabuses for 14 subjects, 17 guidelines for scientific and educational practices, and manuals for practical exercises, booklets, brochures and books have been printed and provided to TAU.

#### ***Component 2 – Productivity Enhancement and Improved Animal Health***

63. The key objective of this component was to increase access to livestock and veterinary services, and fodder supply for smallholder producers, resulting in decreased mortality and increased productivity of sheep/goat flocks and cattle herds due to a reduced incidence and prevalence of diseases. Main expected outputs by implementing 2 subcomponents are: (a) capacity for sustainable and efficient livestock production built, and (b) private vets provide animal health and production services on a sustainable basis. In total US\$2,245,000 was allocated to the implementation of the component and of which US\$1,880,000 (83%) was disbursed on 1 September 2021.
64. The weight of cattle per animal of LPDP-II beneficiaries was estimated to be 30% higher compared to the control group. Similarly, cattle kept by LPDP-II households had more total milk production (+120%) and productivity (+99%) than households in the control group. Project impact assessment indicates that there is a significant decrease in shocks faced by the treatment group project beneficiaries (50% less than the control group). This is likely linked to beneficiaries being better adapted to climate change or to animal disease thanks to better quality herd, veterinary services, technical support, significant investments in climate resilient infrastructure, equipment and TA for fodder production and storage. Finally, LPDP-II livestock farmers are 45% more likely to use preventive treatment (especially vaccinations), spend 36% less on preventative treatment per cattle, are 21% more likely to feed their livestock from protected rangeland in summer, 23% more likely house their livestock in stalls in winter, and 17% more likely provide cattle drinks from boreholes and/or standing pipes during winter.

#### ***65. Sub-Component 2.1: Livestock Productivity Enhancement***

66. Sub-component 2.1 included multiple activities to enhance livestock productivity both in terms of heads as well as increasing the number of off spring and by improving fodder production. Livestock productivity enhancement activities were mainly implemented through the Common Income Groups as established under component 1.1. As also mentioned under component 1.1, LPDP-II established in total 173 CIGs for crop production (target: 150 –117% achievement) with 3586 members receiving 93,4 ton of fodder seeds (alfalfa, barley, sainfoin, fodder beet and corn) and 488 ton of mineral fertilizers (carbamide and Superphosphate). In total, 1,134 hectares land was planted with these seeds. Also, 146 groups for small ruminants (target: 50 – 292% achievement) with 9413 members were established. Some 2011 male rams of the Hissar breed were provided to these groups resulting in a 54 921 heads of improved breed lambs during the implementation period
67. In addition, PUUs were provided with direct support in the form of 87 purebred cows, 441 purebred bulls and support to improve artificial insemination techniques. In the end, project data noted an increase of 2765 heads. The counted offspring of these bulls so far is 9147 crossbred calves. In addition, 195 incubators were distributed to breed chicken and turkey. Incubators produced

22267 chickens and 10881 turkeys. Also, the 173 fodder production CIGs received 93.4 tons of fodder seeds (alfalfa, barley, sainfoin, fodder beet and corn) and 488 tons of mineral fertilizers. The total land area sown with seeds is equal to 1,134 hectares. To ensure that the CIGs were able to continue their activities after implementation, 97 business plans have been developed. In addition, 8 seed farms were provided with 41,87 tons seeds. Using these seeds, they were able to produce a total of 3425.2 tons of seeds and 8600 tons of fodder beets, 475 tons of hay and 500 tons of silage.

68. Under this subcomponent, a technical assistance agreement between the PMU and the Republican Enterprise on breeding under the Ministry of Agriculture of the Republic of Tajikistan was signed to improve artificial insemination and the procurement and sales of purebred animals. Some 15 sets of equipment for artificial insemination and 1800 stud bull semen were used for the improvement of local cattle breeds, were provided under this agreement. It should be noted that the AI services did not only served targeted villages but also surrounding villages that did not have an AI semination scheme in place.
69. To assure the sustainability of this sub-project, some 97 business plans have been developed. These business plans allow for the development of entrepreneurial activities for productivity enhancement in combination with the entrepreneurial strengthening activities.

### ***Sub-Component 2.2: Improved Animal Health***

70. Sub-component 2.2 aimed at providing quality animal health services to project's beneficiaries in order to improve livestock productivity. The subcomponent included institutional support to the FSC as well as support to veterinarians directly.
71. Institutional support to the FSC consisted of an institutional assessment of the country's animal health system to identify the capacity gaps. This allowed for the development of an action plan in order to improve the country's animal health system through the newly established FSC. laboratory equipment has been purchased and transferred to the Food Security Committee allowing it to improve its academic capacity on food safety diagnosis. Laboratory equipment provided included amongst others diagnostic equipment, refrigerators, thermostats, bactericidal lamp, UV-View Photo spectrometer, Quality Analyzer for meat products, milk quality analyzer, ovoscopes.
72. Sub-component 2.2 premised on the assumption that the veterinarians supported under this subcomponent were private operators and aimed at improving the livestock system by contributing to privatization. However, the Food Security Committee, preferred to support public vets in line with the overall strategic mission after its reorganization in 2018. After negotiations, it was decided to transfer the packages to the PUUs and allow them to select public vets in the LPDP-II implementation area who should receive the support. In total 60 veterinarians have been selected to receive project support under this component. They received a 5 day refresher training from the project in order to update their knowledge and skills as per the latest innovations. The 60 veterinarians also received 60 vet kits that were developed further to a survey during which they could indicate their preferences. Although the subcomponent deviated from design, the achievements under this subcomponent were notable with 269 villages being served by the veterinary services and in total 37065 household receiving support from the services.
73. Support under component 2.2 allowed for the development of Animal Health Plans (AHP). These AHPs are an integral part of the CLPMP. Timely implementation of the measures provided for in the AHP contributes not only to the prevention of infectious and to other animal diseases, but also to the protection of people from zoonotic diseases that are transmitted from sick animals (anthrax, rabies, echinococcosis, and others).
74. Project impact assessment data indicates that in spite of the changed implementation approach, LPDP-II efforts on animal health are noteworthy. For example, LPDP-II livestock farmers are 45% more likely to use preventive treatment (especially vaccinations), spend 36% less on preventative treatment per cattle, are 21% more likely to feed their livestock from protected rangeland in summer, 23% more likely house their livestock in stalls in winter, and 17% more likely provide cattle drinks from boreholes and/or standing pipes during winter. Also, impact assessment data indicated that there is 50% decrease in shock faced by LPDP-II farmers and relates this to increase know-how on livestock management.

### ***Component 3: Pasture Development and Diversification for Vulnerability Reduction***

75. The key objective for this component was to increase access to more productive and climate resilient pasture areas as well as to diversified income-generating opportunities for livestock communities through a sustainable, community-led management of natural resources.
76. Two sub-components were implemented to achieve the objective. The main expected outputs for this component were: (i) resilient and sustainable investments prioritized in CLPMPs completed and functioning, and (ii) alternative income-generating activities supported to enhance risk-coping. In total US\$18,502,000 was allocated to the implementation of the component and of which US\$22,540,000 (122%) was disbursed on 1 September 2021.
77. Output and income assessment data indicate that project activities increased LPDP-II beneficiary incomes with 109%. Whilst livestock productivity increased with 30%, there was a reduction in herd size as well. This decreased the overall pressure on the pastures. In addition, there was an overachievement in the number WIGGs established by the project (target: 22 – achieved: 261).

### ***Sub-Component 3.1 – Community Resilient Pasture Management and Investments***

78. Under this component, the project supported all 197 (target 180 – achievement 109%) PUUs with developing CLPMPs comprising of pasture management plans (see below) and in investments (sub-projects). Both were developed using participatory methods building on the inputs of PUU members. By implementing both plans, communities addressed climate change related issues, pasture degradation, deterioration of pasture infrastructure, rehabilitation of winter pastures and sustainable animal health and production.

79. In total 600 sub-projects have been implemented via the investment plans. The total value of the CLPMPs investment plans depended on the size of the population (meaning that a fixed amount was allocated to each CLPMP based on the number of households in the population). Roughly 50% of the subprojects were for the provision of agricultural machinery, 15% of the sub-projects was for pasture improvement, 5% of the sub-projects for water supply lines and watering points and the remaining was for a variety of sub-projects such as livestock bridges, wells, pasture improvement and cattle tracks (see below for a more detailed discussion).
80. *Agricultural machinery:* Overall, agricultural machinery was the first choice for the vast majority of the communities. PUUs received 256 tractors and 2886 other different agricultural machineries such as front loaders, grain harvesters and excavators. Oversight to the PUUs was provided by district officers, M&E consultants and Community Development officers to ensure that procedures were developed on the appropriate usage of the machinery. Agricultural machinery were used in communities and surrounding communities for a variety of activities such as road repair, drinking water transportation and community works. Some services were offered free for village members (e.g. drink water transportation) or poor community members. Profit margins fluctuated from year to year and were influenced by external factors such as rain fall. Throughout the years, the overall turnover of PUUs through agricultural equipment was able to steadily increase and the combined turnover of PUUs was TJS 7.254.890. The profit was TJS 4.420.304 and PUUs were able to create 2-3 jobs at their organizations due to agricultural machinery. Overall the business/profit model of the PUUs was considered sustainable and descriptive statistics indicate that the use of agricultural equipment was 2.5% higher in the LPDP-II target group than in the control group. Also, descriptive statistics indicate that there is high readiness from the target group to invest in agricultural equipment (69% of the target group and 19% of the control groups) which might could be an indication of the overall satisfaction from the PUUs with the agricultural machinery. The provision of mechanized equipment to PUUs contributed to improving productivity of labour, enhancing fodder cultivation and conservation, and also improving communal infrastructures (roads). It also played a catalytic role in mobilizing communities for PUUs and pasture management initiatives, since equipment access was perceived as a direct and concrete benefit from the new PUUs membership. In addition, PUUs' ownership of equipment strengthened their sustainability through the collection of fees Table 3 (below) shows how agricultural machinery was used across districts.

**Table 3. Use of agricultural machinery across districts**

	Repairing of village roads (km)	Drain cleanage (km)	Waste collection (ton/h)	Drinking water transportation (ton)	Services for poor Hhs (person)	Community works (hour)	Free services using Front Loaders (person/poor)	Water supply line for livestock(km)	Constructed watering point (unit)
Vose	10	0	2,7	170	36	657	0		
Kulob	1,5	2,7	0,9	0	10	153	5		
Dangara	2,58	0,7	0	0	15	750	1040	0,8	5
Hamadoni	27,5	6	17	0	180	0	111		
Farkhor	31,9	22,6	5,2	118	265	39	346		
Total	73,48	32	25,8	288	506	1599	1502	0,8	5

81. *Pasture infrastructure projects:* In total, 72 infrastructural sub-projects were implemented. Specifically these included 52 structures for drinking water lines and watering points for livestock, 5 rehabilitated pasture roads, 9 bridges to pasture, 1 well, 1 disinfectant bath, 2 livestock markets and 2 projects on construction veterinary clinics. Supervision and maintenance of this infrastructure lays with PUUs. Water lines (the larges number of sub-projects) were specifically appreciated by beneficiaries as it allowed them to deal with prominent draught issues that were indicated by 8.1% of the population as an issue around pasture degradation.
82. *Demonstration plots:* Some 96 PUUs received 198 sets of fences for a total area of 242 hectares of land. In total 36 PUUs received electronic fences for 65 hectares of demonstration plots. The purpose of demonstration plots was to illustrate the vegetation response to absence of livestock grazing, which should reveal a diverse array of plant species that are not obvious under continuous grazing. Demonstration plots led to a decrease in soil degradation and an increase in vegetation in fenced plots.
83. CLPMPs also included pasture rotation plans as part of the pasture management plans. Pasture rotations plans prescribed when/where grazing would take place and when/where rest periods would be taken into account. Plans were written and overseen with the support of a national pasture development specialist and displayed at the PUU offices. All plans were developed in the early stages of implementation with for example the initial 180 plans being developed by early 2018. PUU members were trained on the use of the plans and geo spatial planning tools developed with support of the state committee on land management. Some initial issues around the quality of the plans (e.g. too few grazing units) were sorted out in the early stages of implementation.
84. Overall, impact assessment results show that livestock farmers in the treatment group are 50% more likely to use rotation plans on pastures and 42% use pastures managed by PUUs. When the pastures are not being grazed, treatment villages are also 13% more likely to work to restore them from degradation to prepare them for future grazing compared to the control group. Also, treatment villages are 26% more likely to rely on visual validation of restoration of pastures and, therefore, less likely to depend on expert assessment of pasture restorations before resuming to graze on common pastures. This is perhaps because the PUU members in LPDP-II villages were trained to independently assess restoration of grazing land
85. To improve the quality of the pastures and restore ecosystems, some 20850 Waterboxx containers with modern water-saving

technology were delivered to PUUs. After training on Waterboxxes, the equipment allowed to cultivate fruit and shade trees in dry areas. Monitoring data shows 70-80% of the trees/fruits planted with the Waterboxx were in good condition.

86. Finally, some 1509 hectares of pastures in targeted districts have also been improved through mineral fertilizers. 24 PUUs benefited from drip irrigation in order to improve their pastures further to project analysis.
87. Overall, the vast majority of the CLPMPs were developed and approved in 2018 and the subprojects approved over the next couple of years. PUUs secure financial sustainability by (i) collecting membership fees for livestock head and (ii) by offering services to members and surrounding communities. The successful implementation of this sub-component as shown by the overall positive results above, allowed that 80% of the total project funds were managed by communities through PUUs.

### **Sub-component 3.2: Income Diversification**

88. The project has well surpassed its targets and established 261 WIGGs (target 22) with a total of 1559 women involved in its activities. LPDP-II disbursed grants for IGAs in beekeeping (28% of the groups), rosehip production (5% of the groups), poultry (64% of the groups) and milk processing (3%).
89. Project design shortlisted some of the IGA for WIGGs. In the early stages of project implementation, these activities were validated by the gender specialist and subsequently the composition of the IGA packages were confirmed. Beekeeping groups for example, were provided with beehives and additional necessary equipment for beekeeping whilst poultry groups received turkeys as well as feed. Table 4 details the input and equipment provided to WIGGs.

**Table 4. Input and equipment provided to WIGGs**

	<b>Total WIGGs</b>	<b>Beneficiaries</b>	<b>Input/equipment provided</b>
Cultivated and processing rosehip	12	120	29 000 bushes of rosehip, 12 packing and drying equipment for processing
Milk production and marketing value chains	8	87	16 black-and-white cows, 71 Swiss-style cows, 8 industrial refrigerators, 32 cans and over 42 tons of feed.
Bee-keeping group	74	295	2950 hives with all the necessary equipment for beekeeping
Turkey breeding	167	1057	3888 female turkeys and 432 male turkeys, as well as 290677 kg of feed, and 195 incubators
<b>Total</b>	<b>261</b>	<b>1559</b>	

90. Women were selected based on demand and through the targeting criteria set at design which prioritized women from poor households, women-headed households and young families. Specific and finetuned targeting was done through a participatory approach at community level. The average WIGG group size varied from 11 (for milk processing) to 4 for beekeeping. Participatory processes were used allowing the WIGGs to select their activity and WIGGs were asked to provide a match of 5% to contribute to the project. All women interviewed during the field visits reported a positive outcome of the initiative and an increase in their income. In order to increase the sustainability of the WIGGs, business plans were developed.
91. Overall, field visits indicated that benefitting women appreciated the support provided. Impact assessment indicators as well as descriptive indicators indicate an overall improvement in empowerment (see gender section).

## **D.2. Rural Poverty impact**

### **i) Household income and assets**

92. Household income and assets rating is rated satisfactory (5). Overall, impact assessment results shows a statistically significant increase in the livestock incomes by project beneficiaries compared with the control group. LPDP-II project beneficiaries livestock incomes increased by 109% compared to the control group. The weight of cattle per animal of LPDP-II beneficiaries was estimated to be 30% higher compared to the control group. Similarly, cattle kept by LPDP-II households had more total milk production (+120%) and productivity (+99%) than households in the control group. Livestock assets in the treatment group are lower than in the control group. This is linked to the principle of having smaller herds with higher productivity.
93. Households reporting adoption of new/improved inputs, technologies or practices reached 3 649 HH (appraisal 3 000HH). Number of jobs created through permanent employment is estimated at 2 243 people, mostly through WIGGs activities, Pastures Users Unions and machinery operators.

94. The project activities were conducted in Khatlon region which has population of 751 226 people equivalent to 96 571 HHs and 335 villages with total area of pastures at 136 827 ha, of which project affected population of 426 997 (57% of total population) equivalent to 51 391 HH (53% of total HH), and 197 villages with total pasture area of 95 307 ha (70% of total area). The project supported through different activities 111 444 cattle and 235 320 small ruminants which is approximately 48 % of all cattle and 42% of all small ruminants in Khatlon region according to the January 2021 Tajikistan statistical data and PMU sources.

## **ii) Human and social capital**

95. In terms of social capital as the networks of relationships among people who live and work in a particular society, enabling that society to function effectively, increasing the social capital is perhaps the one achievement in which the project has scored highest. With modest investment in technical assistance for policy and legal reform, and mobilization of the rural population the project has established 197 PUUs embossed in a wider institutional network created by the project comprising the Pasture Law, the Pasture Management Trust for central management, and Pasture User Associations at district level. This new operating model was instrumental and ensured equitable participation of men and women in decision-making processes at the community level while strengthening their role in controlling the village natural resources (pasture lands).
96. LPDP-II employed a bottom up planning process anchored on participatory planning at the community level to support rural women and men to develop PUUs from within the community. Increased the individual and collective capacities of beneficiaries/PUU in LPDP-II clearly aimed at improving the management of pasturelands. Besides capacitating farmers, LPDP-II also actively provided long-term access to pasturelands. In total, 84 certificates (target: 80 – achieved: 105%) and 169 agreements (target 180 - achieved: 93%) have been provided to the PUUs throughout project implementation. The vision and strategy of communities on pasture management were formulated in CLPMPs (target: 180 - achieved: 197).
97. Descriptive statistics indicates that PUUs, are well-known within the communities. In control groups, 85% of the population indicated that they do not know about village level organizations similar to PUUs, whilst in the target groups only 7% of the beneficiaries are not aware of PUUs. Throughout implementation, multiple IFAD missions conveyed a positive report about the participatory planning methods that allows beneficiaries to express their concerns, priorities and interests. It was also noted during interactions with that PUUs attracted full involvement of communities. To assure that beneficiaries were able to take charge over their organizations and that they were managed smoothly, extensive training to capacitate newly established PUUs was provided to a larger scale than planned.
98. Outcome data also indicates that membership payments are high among PUU members: compared to other types of village institutions, PUUs are 37% more successful in collection of membership fees. Also in terms of other social cohesion indicators, PUUs score statistically significant better than their peers do. PUUs in treatment villages are 26% more likely to hold frequent meetings (every month or more frequently) and PUUs are 40% more likely to attract more than 50% participation rate.
99. Field visits as well as descriptive statistics suggests that the PUUs were inclusive. Landless farmers (which in this project context are more likely to be destitute beneficiaries) are able to influence in decision making on agricultural investments such as purchasing new technology (33% in the target group versus 24% in the control group). Also, landless farmers were aware about the fact that they can use new technologies for productive purposes.
100. In addition to strengthening of collective bodies, LPDP-2 also provided capacity building activities to individuals (or small groups such as CIGs and WIGGs) in the majority of cases in combination with an asset transfer. For example, 60 veterinarians were trained on the latest techniques and received veterinary kits. Finally, in corporation with the Tajik Agrarian University a variety of human capital development activities either directly targeted at students (e.g. by offering scholarships to 60 students) or developing the academic environment in Tajikistan (e.g. by developing a curriculum on sustainable pasture management).
101. Concluding, as LPDP-II strengthened PUUs in an inclusive manner and contributed to the strengthening of individual capacities, human and social capital is rated satisfactory (5).

## **iii) Food security**

102. Food security does not feature as a major activity in the project design. In fact, in the components, subcomponents or structures of the cost tables there are no activities convoked for this goal. Yet improving the nutrition of 18,000 poor households by 15% from increased consumption of meat and dairy products is a project outcome. The project design apparently relies on that the increases in production will as a side effect also lead to increased self-consumption of milk and meat and therefore improved nutrition. Also, beneficiaries would benefit from increased incomes and thus free up resources to purchase more and nutritious food. The secondary importance of food security in the project area was highlighted also by the RIA impact assessment, according to which food security is not a major concern. The impact assessment notes that the vast majority of LPDP II households (92%) are food secure even in the absence of LPDP II, and that both in the treatment and the control group the results indicate a positive situation in the communities overall. This seems to imply that there were no significant issues around nutrition at the time of approval of the project. This notwithstanding, at the time of design, measurement of malnutrition was a mandatory indicator for the logframe, and thus features prominently. Since, IFAD has discontinued the measurement of the indicator, and it was excluded from the project logframe pursuant to this change in policy.
103. In terms of the fulfilling the precondition to above described project logic i.e. that food security will be improved by means of increased production the project has done well: the weight of cattle per animal of LPDP-II beneficiaries was estimated to be 30% higher compared to the control group. Similarly, cattle kept by LPDP-II households had more total milk production (+120%) and productivity (+99%) than households in the control group. Also, there was an increase of 109% in incomes from livestock activities due to LPDP-II.

104. In conclusion, given that food security did not feature among the project's components, subcomponents and financed activities the impact on the is rated 4 moderately satisfactory.

#### **iv) Agricultural productivity**

105. LPDP-II includes multiple activities to improve productivity to improve agricultural productivity, in specific livestock productivity. Another key challenge highlighted in the PDR was that the overall quality of pastures in Tajikistan was rapidly declining due to the absence of organization at community level. Pressure on pastures further increases due to climate change, overgrazing and increasing fodder prices. Therefore, LPDP-II offered support to fodder production, livestock productivity as well as activities around pasture improvement through rotation and fertilization. These combined efforts would lead to an increase in livestock productivity, which, as the results show, occurred. Specifically, milk production and productivity per animal increased by 120% and 99% thanks to household's participation in LPDP-II. Also, the weight of cattle was estimated to be 30% higher for LPDP-II beneficiaries compared to the control group
106. Project output data indicate that 95.036,69 ha of pastureland has been improved by PUUs through amongst others rotation, demonstration or the application of fertilizer. To support the rotation among PUU members, LPDP-II developed pasture management plans including pasture rotation plan. Pasture rotations plans prescribed when/where grazing would take place and when/where rest periods would be taken into account. Plans were written and overseen with the support of a national pasture development specialist and displayed at the PUU offices. PUUs were also trained on how to recognize recovered and thus performing pastures ready for grazing.
107. In terms of demonstration and the application of fertilizers, LPDP-II rolled out this dimension of pasture improvement with support of the CIGs/WIGGs. Some 173 CIGs for crop production were established. The 93,4 ton of fodder seeds (alfalfa, barley, sainfoin, fodder beet and corn) and 488 ton of mineral fertilizers (carbamide and Superphosphate) received by them benefitted 1,134 hectares of land. Due to the nature of these crops, they were not only able to benefit pasture improvement but were also used as fodder. Pistachio, almond and cherry trees, offered an additional source of income to CIGs and served as windbreaks for pastures. Finally, 29 000 bushes of rosehip benefitting 12.9 hectares of land were distributed to 12 WIGGs.
108. Impact assessment data indicates that livestock farmers in the treatment group are more likely to use rotation plans on pastures and use pastures managed by PUUs. When the pastures are not being grazed, treatment villages are also more likely to work to restore them from degradation to prepare them for future grazing compared to the control group.
109. LPDP-II included multiple activities to improve agricultural productivity. Husbandry training was for example extended to 5,171 households (target 3000 – achievement 225,8%) and 9,413 households (target: 3250 – achievement 292%) were engaged in sheep production trials. Also, some 146 groups for small ruminants (target: 50 – 292% achievement) with 9413 members were established. Some 2011 male rams of the Hissar breed were provided to these groups resulting in a 54 921 heads of improved breed lambs during the implementation period. PUUs received direct support in the form of 87 purebred cows, 441 purebred bulls and support to improve artificial insemination techniques. Project output data consequently noted an increase of 2765 heads. In the end, project data noted an increase of 2765 heads and the counted offspring of these bulls so far is 9147 crossbred calves. Beyond the seeds provided to CIGs, 8 seed farms were provided with 41,87 tons of fodder seeds to increase the access to fodder seeds. Using these seeds, the seed farms were able to produce a total of 3425.2 tons of seeds and 8600 tons of fodder beets, 475 tons of hay and 500 tons of silage.
110. Further to data from the impact assessment, productivity trainings and support were effective. Livestock farmers in the treatment group are more likely to use preventive treatment (especially vaccinations), spend lower amount on preventative treatment per cattle, feed their livestock from protected rangeland in summer, house their livestock in stalls in winter, and provide cattle drinks from boreholes and/or standing pipes during winter. Consequently the amount of milk production and productivity per animal increased by 120% and 99% thanks to household's participation in LPDP-II. Also, the weight of cattle was estimated to be 30% higher for LPDP-II beneficiaries compared to the control group.
111. Treatment households are less likely to practice artificial insemination to re-produce livestock. This result is likely due to the fact that the project was able to increase the productivity of livestock through its support of natural breeding by distributing bulls and hissar sheep accompanied by technical assistance, which supplanted the need for AI.
112. Results indicate that improved pasture with parallel efforts on pasture improvement, animal health and husbandry technics improved animal productivity. Consequently agricultural productivity is rated 5 satisfactory.

#### **v) Institutions and policies**

113. LPDP-II's key objective for component 1 captures the project's ambition around policies and institutions well: to enhance the capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development. Overall, LPDP-II has a comprehensive view of institutional and policy development. Most importantly, it promoted a significant improvement to the Pasture Law, established and capacitated LPDP-II created 197 PUUs at village level, 4 PUAs at District level and supported the development of the PMT, TAU and FSC.
114. LPDP-II expanded the regulation on pasture management by revising the pasture law. A working group was established at national level, and public hearings were also held at regional level, to collect views and suggestions from the grassroots level actors. With the support of the LPDP-II national expertise, amendments affecting around 70% of the articles of the original law were proposed. The new Law was approved in June 2019.
115. Main changes brought by the revised law included, among others: (i) definition of rights and duties of parties in lease

arrangements, (ii) introduction of legal provisions related to protection of pastures, (iii) clarifications on payment and utilization of renting fees by local authorities, including for pasture protection, (iv) definition of rights and duties of PUUs and PUAs, (v) establishment of local pasture regulation commissions. With impact assessment data as well as output related data confirming that the 197 PUUs are well functioning and cohesive, the project was able to reinforce and secure achievements at field level by for example bringing 95,036,69 ha of pasture land under management by PUUs.

116. In addition, LPDP-II provided institutional support to several national level public institutions: such as the Tajik Agrarian University and the Pasture Meliorative Trust which is the defacto Pasture department within the Ministry of agriculture. By increasing the effectiveness and efficiency of both institutions, the overall enabling environment of pasture management in the country has been improved. Support to the TAU mainly consisted of the development of new curricula on pasture management, scholarships for students and refurbishments of the university. The PMT received technical assistance in the form of secondments of technical specialists who trained the PMT on technical subjects related to pasture management as well as administrative and financial management. Finally, further to recommendations by supervision missions, LPDP-II also provided inputs in the newly developed 5 year pasture strategy.

117. Overall, the activities undertaken under institutions and policies are likely to be rated satisfactory (5).

#### **vi) Access to markets**

118. Improving access to market was not considered a priority in the project's 'Theory of Change' and strategy. Therefore, very few activities and a limited budget were dedicated to this aspect. LPDP-II's activities that to a certain extent address market access relate to the production and processing nodes of the value chain. These include the income generating activities under component 3.2 and the productivity enhancement included under component 2.1. Here LPDP-II well exceeded its targets by establishing WIGGs in turkey breeding and poultry, beekeeping, rosehip cultivation and milk processing as well as CIGs in livestock.

119. Some marketing activities executed by LPDP-II include support to WIGGs and CIGs for their participation in fairs and demonstrations, by providing information on packaging, branding and online marketing (e.g. somon.tj, and Facebook, Youtube) further to recommendations by supervision missions. These activities have added new skills and knowledge to the basket of producers women members of WIGG. Field visits indicate that the products produced with LPDP-II are sold in local, district and inter-district markets. Especially WIGGs in honey have been able to sell their produce at high prices and some WIGGs (e.g. a rosehip WIGG in Farkhor) was able to sell in bulk via the internet.

120. In spite of this, impact assessment data confirm that while the project generated productivity gains in livestock but that it did not increase market access to livestock sold alive, livestock by-products such as milk and meat. As a result, the total value of livestock sales is not different between LPDP-II beneficiaries and the comparison group.

121. Overall, in view of the limited ambition of LPDP-II in the outset improving access to markets in the production/processing nodes of the value chain, market access is rated 4 moderately satisfactory.

### **D.3. Gender equality and women's empowerment**

122. Project design recognizes that the division of economic and social power is not equally distributed between genders and that stark traditional gender norms continued to dictate social and economic life in rural Tajikistan. Access to land remained an issue for women and consequently their productivity was lower than men. Few women were involved in economic activities and both at the household as well as within communities, hence gender was mainstreamed in all project activities. In total, the project reached out to 51391 households of which 8% or 4343 households (target: 3,192 households) were female headed households. This corresponds with 426,997 people of which 49% or 205,903 were women (target: 49% or 117,306 women).

123. Women were included in the community consultations leading to the establishment and PUUs as well as the development of their CLMPs. Supervision reports noted the active participation of women in community meetings ranging between 20% to 50%. In line with policy and implementation guidelines, women were pro-actively included in PUU boards with in total 30% of PUU members being female. Overall, multiple missions indicate that female PUU members seemed confident and dedicated to fulfil their role as a PUU board member. Besides increasing the voice of women, the project also economically empowered women. Namely, one entire sub-component was targeted at providing economic opportunities to women. Specifically, Women Income Generating Groups were formed with the most vulnerable from the community based on a participatory rural appraisal. In total, the project supported 261 WIGGs with beekeeping, turkey breeding, milk processing and rose-bud activities to economically empower women 1559 women.

124. Although it was initially foreseen that gender activities would have been disbursed among different PMU members, the project was able to free up funds and hired a gender specialist in 2018. The Gender Specialist was able to develop a gender strategy and engaged directly with the WIGGs on a regular basis through gender assessments. The mission found she was well aware about prevailing issues for women in the society and that she gave context appropriate advice on how to tackle them. Project M&E data was gender disaggregated and the project put in place an impressive M&E system also allowing to adequately gather disaggregated data from all the different implementing partners.

125. Impact assessment results show that LPDP-II was particularly favourable for women headed households. Women headed households in the treatment group have much higher livestock income (661%), crop income (114%), milk production per year (19%), milk production per animal per year (12%), and total annual value of livestock sales (80%) compared to women headed households in the control group. The majority of these activities were specifically designed for (vulnerable) women through WIGGs which indicates that appropriate activities were designed and implemented in favour of women.

126. However, impact assessment results do not have a statistically significant impact on IFADs GEWE objective around the distribution of equitable workload dimension. With the impact assessment specifically checking whether men and women had equal decision making power, it found no difference between LPDP-II beneficiaries and the control group.
127. Overall, the project thus had good impact on IFADs economic empowerment objective, especially for women headed households, and IFADs voice objective but no impact on the equitable workload objective. Considering the above, Gender Equality and Women's Empowerment is rated 4, moderately satisfactory.

#### **D.4. Adaptation to climate change**

128. Adapting to climate change is a core project objective and LPDP-II has mainstreamed a climate-smart approach throughout its activities, supported by the ASAP grant. The adaptation interventions designed by the project were suitable to the current and projected climate change impacts on the livestock sector in Khatlon region and provided a good basis for upscaling. The Project established 197 PUUs and supported them to develop CLPMPs for 2020-2024.
129. LPDP-II PUUs were given various capacity building training on topics such as the impact of climate change on pastures and livestock, using by-products as alternative fodder, and development of community livestock and pasture management plan. The visited PUUs showed awareness of climate change implications to agriculture and livestock, emphasized by the negative impact on rainfed crops and pastures of recent relatively drier springs and autumns with low annual precipitation. Through project interventions, **193,905** poor smallholder households (ASAP core indicator target: 190,000- achievement: **102%**) were supported to deal with the effects of climate change.
130. All 197 community groups (including their 1632 board members) were engaged in natural resource management and climate risk management activities. Output data indicate that as much as 51,391 poor smallholder households (135% of target) were involved in these 197 groups and reported having enhanced the resilience and adaptive capacity to climate change through sustainable pasture management, including rotational grazing, cultivation of dry-tolerant perennial fodder crops, use of water-efficient technology (Groasis Waterboxx). CLPMP investment plans implemented 72 infrastructural sub-projects for pasture development. Among them were 52 structures for drinking water lines and watering points increasing the access to water for livestock in times of draughts. Many of the 296 agricultural machinery subprojects contributed to the climate change adaptive capacity such as by repairing village roads (73km), cleaning the drains and ditches to reduce salt waters (32km), cleaning the wastes from village and schools (25.8ton/ha), drinking water transportations for villagers and livestock (288ton). The project planted 526.5 hectares of demonstration plots for 96 PUUs to illustrate the vegetation response to absence of livestock. Also 8 seed farms were provided with 41,87 tons of fodder seeds allowing households to cope with rising fodder prices due to climate change. Besides, income generation and diversification through 173 CIGs and 261 WIGs also contributed to enhancing adaptive capacity in the project area.
131. The project also contributed to enhancing climate adaptive capacity through policy engagement and knowledge management. The project prepared and passed a five-year strategy on improving pasture management in adaptation to climate change following the revised Pasture Law. Also, PUUs were provided with information materials, buckets, brochures on the following topics: cultivation of fodder crops, bushes and trees adapted to climate change, establishing demonstration plots on pasture improvement, using and management of agricultural equipment, technology of rosehips cultivation, feeding of dairy cattle, livestock diseases, etc.
132. Project impact assessment data also indicate that there was an increase of 30% in the productivity of LPDP-II treatment group livestock compared to the control group while there is decrease of livestock assets (or herd sizes) of 30%. This objective was conceived during the midterm review as a positive environmental impact due to a net decrease in Green House Gas emissions due to the decreased herd size whilst no (or even the contrary) productivity losses were faced by the target population.
133. Adaptation to climate change was a core objective of LPDP-II and ample support was provided to community members to mitigate the negative effects of climate change. With the limited impact assessment related data being available on the actual impact of the interventions on the adaptive capacity of the target group, adaptation to climate change is rated 5, satisfactory.

#### **D.5. Environment and natural resource management**

134. In terms of environment and natural resource management, LPDP-II aimed at achieving productivity objectives aligned with environmental objectives. Pasture quality should improve by pasture rotation to restore degraded pasture, herd techniques and improved mating techniques to increase value, weight and production of livestock units while reducing the herd size.
135. Well-functioning PUUs were the entry point and vehicle ensuring sustainable environment and natural resource management. PUUs received pasture management training and developed pasture management plans as part of their CLPMPs. Although these plans showed some flaws in the early stages of implementation with not enough e.g. resting periods assigned, these have been resolved throughout implementation. Project output data indicates that 95037 hectares (100% of target) of pastures have been placed under climate resilient practices. Out of these, 7,901 hectares (target: 7,560 hectares – achievement 104,51%) have been rehabilitated through demonstration plots, applying fertilizers and the construction of water points. Some 81% has been improved through pasture rotation with the remaining 19% being improved through demonstration plots, use of mineral fertilizers in pastures, and implementation of technical sub-projects for improving fodder production base.
136. Impact assessment results show that LPDP-II beneficiaries exhibit significantly higher use pasture plans and rotation (52%) and significantly higher likelihood to access common pastures (42%) than the treatment group. When the pastures are not being grazed, LPDP-II beneficiaries are also more likely to work to restore them from degradation to prepare them for future grazing compared to the control group. LPDP-II beneficiaries villages are more likely to rely on visual validation of restoration of pastures and, therefore, less likely to depend on expert assessment of pasture restorations before resuming to graze on common



pastures. Through CIGs, providing fodder to poor households and alternative income generating activities for WIGGs, livelihoods were sustained during resting periods.

137. The design of the project originally meant to address the pressures on pastures by improved access to land, and better pasture rotation which directly reduce degradation and increase pasture productivity. The MTR observed however that these efforts may not be sufficient to put an end to the degradation process, since the global trend in livestock inventories shows a constant increase of the last decades, and the increase in stock rates eventually in the long run will overtake the improved pasture productivity and commence a new trend of degradation. The MTR therefore recommended the PMU to intensify training of the PUUs highlighting the need to reduce pasture pressure in order to salvage carrying capacity and resilient ecosystems. The impact assessment indicates a laudable response by the PUUs to this adjustment: reduction in livestock units by 30% in comparison with the treatment group, significantly reducing the pressure on pastures and supporting the recovery of degraded areas and resilience of ecosystems. It serves to note that this reduction in animals is offset by the improved productivity thus unequivocally also providing a positive net result for sustainable livelihoods.
138. Throughout implementation the project was able to introduce additional measures refocusing communities to natural resource management. LPDP-II introduced waterboxxes which is a water saving technology. Also, it pro-actively started to promote the planting of climate resilient species on pasture land. In particular, planting pistachio, almond, cherry and rosehip trees worked as windbreaks for soil erosion control and fodder crop cultivation (alfalfa, barley, sainfoin, fodder beet and corn) resistant to climate change as well as utilizing by-products as an alternative source of fodder reducing pressure on pasture. Pasture infrastructure development activities were conducted, which eased water scarcity issues for grazing livestock.
139. Improving natural resource management was a particular focus of the project and LPDP-II was able to on a large scale improve pasture quality through pasture management plans as well as improving productivity. Given the above, environment and natural resource management is rated *satisfactory*(5).

## D.6. Targeting and outreach

140. LPDP-II reached out to 51,391 households (HHs) amounting to 426,997 people. This is 13,391 more households than the 38,000 HH (239,400 people) set at design. Out of the 426,997, 205,903 (48%) was female and 221,094 was male (52%). In total, the project was able to reach out to 4,343 female headed households or 8% of the total households reached. Out of the 426,997 people reached, 74,147 people were between 0-6 years old, 93,582 people were between 7-17 years old, 225,205 people were between 18-60 years old and 34,063 people were over 60 years old (see table 5).

**Table 5: Beneficiaries break down**

	Nb. PUU	Nb. HHs	include. Head women	Population								Total	Women
				form 0 to 6 years		from 7 to 17 years		from 18 to 60 years		over 60 years			
				Total	women	Total	women	Total	women	Total	women		
2017	180	38541	3221	59424	29245	71334	35382	155699	77512	26852	12813	313338	155000
2018	179	41045	3035	61446	31363	76359	38278	154087	80808	28847	14163	320647	164424
2019	194	46404	3454	69521	35453	89439	44755	175089	91129	34231	16917	368188	188066
2020	197	49572	3973	69980	36561	90205	46475.89	201974	96116.11	32746	16878	394906	195994
2021	197	51391	4343	74147	40175	93582	48207	225205	100444.5	34063	17076	426997	205903

141. As you can also see in table 4, the average household size increased to 8.3 people per household in the last year of implementation. This is due to the fact that due to the COVID-19 pandemic, many migrant worker returned back home. The project captured these numbers at community level to track the increases.
142. A targeting strategy was developed in the beginning of the implementation period that included geographic targeting, self-targeting and direct targeting. Geographic targeting commenced with the selection of divisions to participate in the project. Based on poverty indicators, Khatlon was selected as the main implementation area for the project and six districts in the region, namely Dangara, Farkhor, Hamodoni, Kulob and Vose were selected to participate in the project. In these districts, Jamoats were selected based on 11 selection criteria including the willingness of the Jamoat to participate in LPDP-II, livestock as agricultural outputs and carrying capacity of the pastures. At village level, PUUs were the first entry point for targeting. Village committee meetings were organized, with a quorum of 80% in order to establish PUUs and elect their leadership. A minimum of 30% of the PUU boards were women due to direct targeting.
143. Direct targeting methods in combination with participatory approaches were used to select the poorest of the poor and (vulnerable) women benefitting from the support of CIGs and WIGGs. By rigorously applying these criteria, project support was largely extended to very poor rural households. External service providers assisted with the selection of beneficiaries for CIGs and WIGGs which also provide additional assurances with regards to safeguarding poverty focus. Not only did it provide them with additional income generating activities, it also made them important enablers for reaching project objectives around productivity enhancement.
144. CIG and WIGGs activities were selected to specifically meet the needs of these groups. WIGGs interventions took for example

mostly place in and around the household which is culturally appropriate in the Tajik context. PUUs also used to extend services (such as community works) at a reduced costs or for free to poor households. Although youth currently is a prominent theme in IFAD currently, LPDP-II did not include specific activities targeting youth. Hence youth was mainstreamed in all project activities.

145. Multiple field visits during supervision missions as well as the completion mission confirmed that the selection criteria were used appropriately during implementation. LPDP-II beneficiaries directly benefitted from increased incomes (+109%), higher weight of cattle per animal (30%), and increased milk production (90%). Communities surrounding LPDP-II villages benefitted from the project to the increased availability of agricultural machinery which PUUs leased to surrounding villages.
146. In addition, the impact assessment indicated that LPDP-II had a positive impact on more vulnerable groups especially female headed households. Women headed households have much higher livestock income (661%), crop income (114%), milk production per year (19%), milk production per animal per year (12%), and total annual value of livestock sales (80%) compared to women headed households who did not benefit from the project. In addition, descriptive statistics indicate that households in the society that are particularly vulnerable such as landless farmers are able to influence decisions in the PUU which is an indication that participatory methods were effective.
147. With LPDP exceeding design targets and making appropriate use of targeting methods, targeting and outreach is rated 5, satisfactory.

## D.7. Innovation

148. The LPDP, and then its extension the LPDP-II have introduced a fully novel and substantial complex of institutions that are dedicated to pasture and natural resource management i.e. a) Pasture User Unions, b) Pasture User Associations at district level, c) Pasture Management Trust at central level rooted in d) relevant legislation such as the Pasture Law. The PUU has proved itself as a major innovation that with low cost effectively converts the village-controlled natural resources and pastures in the country under sustainable management, and presents a platform for subsequent successive work on natural resource and pasture management.
149. Other innovations brought about in PUUs under LPDP-II relate to strengthening the climate focus of the project. LPDP-II increased training on natural resource management and climate change. LPDP-II introduced for example an improved training on verification on the status of the pastures, it rehabilitated pastures through ecosystem restoration, and introduced natural windshields (pistachio trees etc.) and introduced the Groasis waterboxx (see below).
150. LPDP-II also introduced and trained beneficiaries Groasis Waterboxx. The waterboxx is a waterless incubator that collects water from night dew or precipitation, after which it feeds the seedling for a fairly long time. The container also prevents the water evaporation and protects the roots from the sun and small rodents, maintains a constant temperature of the rhizome, which allows trees to grow freely. Because of the Waterboxx, seedlings do not longer need planting pits: the capillary roots will always be intact, which will allow them to regularly transfer moisture to the future tree in the right amount. With increasing draughts, waterboxxes proved to be perfect methods for the watering of pastures (in specific trees planted in order to protect the pastures). LPDP-II is the first project introducing the waterboxx and this is an important intervention allowing beneficiaries to adapt to the negative effects of climate change.

## D.8. Scaling up

151. LPDP-II is in essence a scaled up version of LPDP which piloted and showcases the PUU model (including the Pasture Management Plan approach). LPDP created the concept and was given an institutional and legal framework by the 2013 Law on Pasture, which was further finetuned under LPDP-II. The model had never been implemented in the country till the LPDP took the initiative to pilot it.
152. The pasture law, the complex for pasture monitoring institutions introduced in the course of the LPDP and LPDP-II have made the PUU's a winning village level platform on which the government and donor community build their interventions for pasture and natural resource management. The World Bank's Tajikistan and Resilient Landscape Restoration project approved in 2021 and the UNDP's GEF- financed Conservation and Sustainable Management of High-Value Arid Ecosystems in the Lower Amu Darya Basin approved in 2022 are examples of this. The cumulated value of both projects is approximately US\$ 100 million – thus bringing the PUUs to scale.
153. There is further scope to scale up the approach in countries facing similar situations in terms of pasture management. The lessons learnt from the Tajik PUU model could be very relevant and useful to Central Asia and the Caucasus, in former Soviet countries which face similar problems related to the ownership and management of collective pasture. But they could also be replicated in Northern Africa and the Middle East, where management of rangelands also remains an issue.
154. Since steps are taken by the government as well as other (renowned) government agencies to further scale-up the PUU model, which is at the heart of the project and given that there is in principle scope to export the PUU model to other countries in IFADs NEN region, scaling-up is rated 5 *satisfactory*.

## E. Assessment of project efficiency

### E.1. Project costs and financing

155. By the end of the project total costs from all financiers were US\$ 27.05 million. The total project cost of US\$ 27.05 million was financed through IFAD amount equivalent to US\$ 17.39 million (IFAD loan US\$8.712 million and IFAD Grant of US\$8.678 million); ASAP Grant of about US\$5.098 million, Government Contribution of about US\$ 2.865 million and beneficiaries' participation of US\$ 1.697 million equivalent. Appendix 3 includes a detailed analysis on the project cost and financing.

## E.2. Quality of project management

156. LPDP-II was directly implemented by the State Enterprise "Project Management Unit - Livestock and Pasture Development" (SEPMU) under the oversight of the Ministry of Agriculture. The PMU has been implementing all IFAD funded projects in Tajikistan as a centralized management unit. Many staff members joined LPDP-II from LPDP allowing very smooth continuation of implementation. Throughout implementation, the PMU remained adequately staffed and managed LPDP-II pro-actively which is for example noted by starting timely procurement processes, providing pro-active solutions and having an excellent track-record in terms of financial management. Project staff carefully reviews aide-memoires and reports produced by IFAD and are able to effectively substantiate observations in relation to IFADs work. They respond to emails and queries in a timely manner and with a lot of substance. Due to a strong M&E system, interventions could be corrected throughout implementation and impacts qualified. The project also effectively cooperated with IFADs RIA team in order to produce the impact assessment.

157. The nine-month suspension of the portfolio due to the bankruptcy of the bank with the designated account did not lead to an extension of the project. With minimal follow-up, the PMU promptly took action and agreed actions were timely completed by the project. Furthermore, PMU complied with IFAD rules and procedures in terms of annual work planning and budgeting and involved all level of operations in the process. Approval of the AWPB was sought prior to the new year. A Project Steering Committee (PSC) that is chaired by the Deputy Minister of Agriculture was established in line with the guidelines and approved necessary documentation accordingly. Given the above, quality of project management is rated *satisfactory* (5).

### i) Procurement

158. The overall project procurement throughout the project lifecycle is rated as satisfactory (5). The processes followed IFAD Procurement Guidelines and the Handbook along with the LtB and conformed with the national procurement regulations, where applicable. There are no outstanding procurement activities left. The details are provided further below and under the technical report, as an annex to the PCR.

159. *Procurement planning:* Procurement plans were submitted in a timely matter, together with the AWPB. Due to the project suspension and COVID-19 related constraints, inevitably, few activities were postponed or delayed. Yet, all planned activities in 2020-2021 are now completed. The PP for 2021 is updated, aligned with the AWPB and approved by IFAD. During the project life cycle, the planned activities mostly seemed to be on track. All the previous mission recommendations were completed.

160. *Processes and procedures from prequalification to bidding:* The assessment of the procurement processes conducted for a sample of contracts noted that the proper procurement methods were used for most of the activities based on the cost estimate applied. In a few cases towards the end of project implementation, suboptimal procurement methods were used where the project did not group similar activities and went via national shopping method due to time constraints. Post review procurement is overall satisfactory. Bidding documents are found to be of good quality. For procurement methods that require public bid opening, the procurement unit complies with such procedures. To get a sense and analyze project procurement processes, the mission reviewed in detail not only post a review, but also prior review activities submitted via NOTUS. Processes and procedures are consistent and comply with IFAD Project Procurement Guidelines, Handbook and the LtB.

161. *Processes and Procedures for Evaluation and Contract Award:* The evaluation and contract award procedures are conducted as per principles and procedures of the IFAD Procurement Guidelines and the Handbook. The evaluation committee included the proper number of, with at least one member with the relevant technical knowledge and experience in coherence with the type of procurement. There is evidence of signatures of the evaluation committee in the pages that carry final recommendation and final scores. For Prior Review procurements, evaluation reports and draft contracts evident with IFAD No Objection were duly filed.

162. *Contract Management and Administration; and, Record Retention:* Contract monitoring is conducted by the procurement officers. The contract management processes are adequate, no significant delays or deviations were noted. Some amendments were noted with justifiable reasons. Overall all Contracts included the standard commercial and contractual terms required for a proper procurement agreement and the signed contract are consistent with bidding documents. Payments were consistent and timely following the provisions. Delivery of goods and services was completed mostly with the indicated timelines. To the extent possible via remote mission, the mission found that LPDP II has a dedicated procurement filing system, storing the procurement activities in separate binders which was shared via video file and via soft copies provided online.

163. In 2021, 13 contracts out of 15 planned were signed for goods, works and consultancy services with a total amount of US\$ 1 625 522. Two activities were dropped (vehicles and office equipment for the PMU) to benefit the funds for the beneficiaries. During the project lifecycle, 217 contracts were completed at the total amount of US\$ 23 921 059.00 (102 goods; 35 civil works; 80 consultancies).

164. The mission analysed prior review activities via NOTUS along with the post-review activities, provided in soft copies. Bid processes are satisfactory and the documents are of good quality. Procedures comply with IFAD requirements. The evaluation and contract award procedures follow good procurement practices. The contracts include standard commercial and contractual terms and the signed ones are consistent with bidding documents. Contract management processes are adequate, no major delays or deviations were found. Some amendments were duly justified. Contracts are registered and contract registrars updated, yet, the project has not started using the ICP system. To the extent possible, the mission noted that the project maintained all the records and has a dedicated filing system.

165. The key observations for the entire project lifecycle to take into consideration are as follows:

- On a couple of occasions, the advance payment was provided without the bank guarantee which was flagged in 2020 and the project considered the recommendations.
- One activity out of three of the construction work for waterlines and bridges was dropped in 2021 and these activities were not grouped, but rather conducted via NS. This was due to the process of formulating technical proposals from the beneficiaries, which often exhibited gaps, hence the delays. In timing, the rainy seasons had to be taken into consideration. The specifications for each activity was completed at different times, so the two were conducted separately. Projects in the future should support the beneficiaries at the initial stage of designing technical specifications to avoid long progressions of the activities and ensure the implementation via competitive processes.

166. "Goskominvest" reviews all open bid activities of the MPU (NCB, ICB, LIB, LCS, QCBS). Thus, the approval processes at each stage come from Goskominvest and then IFAD, which could take around 100 days and sometimes, caused delays. Even with the proper planning, for some type of activities, this might have an impact on the project progress. On the other hand, this could be duplicating the procedures and even potential conflict of interest; because the project procurement bid evaluation committee always includes a member from the Goskominvest. These should be further explored and taken into consideration for other IFAD projects. In addition, the updated procurement risk matrix (PRM) is provided to serve the thresholds and procurement methods.

## ii) M&E and KM

167. LPDP-II's Monitoring and Evaluation (M&E) system was well established and well structured. The M&E team tracked project implementation and reported on progress as per the PIM and logframe. The project has developed and has used a well laid-out M&E plan for data collection and tracking throughout the cycle of the project. A well-functioning M&E plan for data collection and tracking was developed and used throughout the cycle of the project. Community Facilitators (CFs) collected data by participating in regular meeting and by organizing specific meetings with beneficiaries and partners. Afterwards, this information was entered into an electronic platform and transmitted to district officers for further screening before validation by the project M&E specialist. At PMU, the M&E specialist verifies further the data before validating them for reporting. The M&E team has kept pace with monitoring the rollout of activities and reporting. Progress is measured against targets.

168. As mentioned above as well, data at community was gathered by community facilitators and signed off when data was gathered. Due to migration patterns, community sizes changed from year to year and in some years there was actually an absolute decrease in the community size compared to the year before. If you look for example at table 5 under the targeting section, the number of women headed households in 2018 is lower than in 2017 due to changing on the ground dynamics. IFADs ORMS system is unfortunately not able to capture negative changes in log frames and this led to some slight mismatches in the ORMS log frame and the actual outreach numbers. The completion mission corrected this by slightly adjusting the year results for 2021.

169. The project completed the baseline surveys on time with support from IFAD and the midterm surveys was conducted in 2019. In June 2021, the final Impact assessment processes were initiated and the field work for this survey was finalized by October 2021. RIA presented initial Impact Assessment results by February 2021. RIA data has been included in the log frame and is the main source for outcome related data. Some outcome related data was also gathered by the project directly in the earlier stages of implementation. Occasionally, midterm data and RIA data are somewhat far apart from each other due to different research methods used. For example, the indicator % income increase of beneficiaries households from alternative income activities (ASAP) was 20% at midterm and 113% at completion. This is because the first is a project outcome data and the second and RIA outcome data. Given its adherence to academic guidelines, RIA data is considered to be more valid by the completion mission.

170. In addition, the M&E team was able to provide an impressive set of geo-referenced data for each activity. Namely, all activities implemented for CIGs, WIGGs, livestock health and productivity as well as pasture management are geo-referenced, and any users of the project information can track the location.

171. LPDP-II has produced many communication and knowledge products. Since its earlier years, with support from LPDP, the PMU has designed and launched a dedicated website to raise visibility of project activities. The website ([rural.tj](http://rural.tj)) is not only a portal for project activities, but also a repository for galleries, videos and other bulletins and reports. It has Russian and English interfaces, which gives it more chance for increased visibility. In addition to developing the website, the project has carried out numerous media activities with public and private news agencies, TV, radios as well as producing and distributing flyers, success stories, factsheets and other brochures. The project takes advantage of its partnership with social groups such as PUUs, WIGGs, CIGs to disseminate innovations, technical notes, and other knowledge products.

172. Overall, the M&E performance is rated *satisfactory 5*.

## E.3. Quality of financial management

173. Overall financial management arrangements were rated **highly satisfactory (6)**. During the project implementation period, the PMU ensured that financial management tasks are properly covered even when there were changes in staffing in the Finance Manager position.

174. Staffing. The finance unit at the PMU included qualified staff who have experience working on IFAD funded projects in Tajikistan.

175. *Budget Monitoring*. The average annual budget execution was 82% from IFAD grant, 97% from IFAD loan and 153% from ASAP grant. Over the years, AWPBs projections adequacy varied, it was most adequate for IFAD loan with an underestimation for ASAP grant budgets and overestimation for IFAD grant budgets. Overall the project managed to disburse most of the financing amount. Project has managed to submit AWPB mostly on time. PMU used to prepare monthly financial reports that included

budget versus actual figures on monthly basis.

176. *Accounting & Financial reporting.* Project was using 1C accounting software, a reliable and robust software that includes a lot of features for automated bookkeeping, contract management, budget management and auto-generated financial reports. The project used to submit the interim financial reports (IFRs) and the unaudited financial statements on time.
177. *Internal Control.* The flow of fund under LPDP-II was centralized for the whole financing for which PMU used to procure services and goods directly without any additional channels involved (implementing partners, etc.). Proper internal control arrangements that meet IFAD minimal requirements were in place. It included adequate segregation of duties and authorization process and proper documentation for project payments.
178. *Internal Audit.* There was no internal audit department or staff in the PMU. The project was subject to ex-post review by the Accounts chamber and by the Agency for State Financial Control and Fight with Corruption of the Republic of Tajikistan.
179. *External Audit.* Quality & Timeliness of Audit was rated highly satisfactory for all annual audit reports of the project except for financial year 2019 as the rating was satisfactory. All reports were submitted on time; within 6 months of the year end. Similarly, assessment of financial reporting was rated highly satisfactory across the years except for two reports. The financial statements were informative and were improved each year based on the previous year's recommendations. The annual accounts were audited by an independent private audit firm which was selected after going through the tendering process. Both the accounting standards and the auditing standards followed were acceptable to IFAD.
180. *Project Assets.* As per the project handover plan submitted by the PMU, vehicles used under LPDP II will be transferred as follows:

#	Vehicle Model	Model Year	Ref.No."	Financing source	To be transferred
1	VAZ NIVA 2121	2013	380 XH 01	LPDP (DSF-8083)	Other GoT Agency
2	KIA Sportage	2013	593 XH 01	LPDP (DSF-8083)	Other GoT Agency
3	Toyota - HILUX	2013	944 XC 01	LPDP (DSF-8083)	Other GoT Agency
4	Hyundai TUCSON	2013	945 XC 01	LPDP (DSF-8083)	Other GoT Agency
5	Hyundai Elantra	2013	946 XC 01	LPDP (DSF-8083)	Other GoT Agency
6	Hyundai Elantra	2013	377 ZA 01	LPDP (DSF-8083)	Other GoT Agency
7	Toyota Land Cruiser Prado	2013	969 xc.01	LPDP (DSF-8083)	CASP
8	TOYOTA-RAV 4	2014	874 XK	KLSP (DSF - 8026)	SFSP
9	VAZ Niva 2121	2014	012XP01	KLSP (DSF - 8026)	Other GoT Agency
10	Hyundai TUCSON	2017	008ZB01	LPDP II	CASP

181. *Closure arrangements.* Project has submitted the final WAs for justification by closure date. The financial instrument were fully justified without any unspent balances left outstanding. Final audit which was due by closure date (30 of September 2021) was submitted on time.

#### E.4. Project internal rate of return

182. Models elaborated for the ex-post EFA through information collected during virtual field visits, M&E system, outcome level statistics (prior to RIA analysis), national statistics office -indicated increase in income and in self-consumption therefore contributing to food security, livelihoods enhancements, gender empowerment and increased social and economic welfare. The base case internal rate of return (IRR) is estimated at 24%. The base case net present value of the project's net benefit stream, discounted at 14%, is US\$ 1,5 million. The summary of economic benefit and costs analysis and the details of the calculations of economic benefit and costs streams for both elements (CLPDP and WIGG) are presented in the dedicated working paper.
183. As shown in models' results, LPDP-II activities were pivotal in increasing productivity and diversifying economic opportunities through value addition activities and a more sustainable use of pastures area and natural resources. In addition, the programme triggered second-tier benefits through job creation and diversification of local produce, meanwhile putting into sustainable economic use resources left idle otherwise. Additional information can be found in annex 4.

## F. Partners' performance

### F.1. IFAD's performance (Quality of supervision and implementation support)

184. IFAD's performance is rated *satisfactory* (5). In total four supervision missions and an MTR mission were timely organized. The first supervision of 2017 was organized in parallel with the last supervision mission of LPDP. Due to the COVID-19 situation, the last SM took place remotely. The mid term review's recommendations to reduce grazing pressure on pastures substantially helped to improve the long term prospects of sustainable livelihoods: the technical assistance programme managed by the PMU helped to reduce the livestock headcount with 30% with the treatment group. Mission teams participating in the missions were diverse and equipped with national and international expertise, both from the region as well as not from the region. The project was included in NOTUS from 2019 onwards. A review of the agreed action indicates that 49 actions were agreed upon of which the majority 40% apply to the overview and project progress action of the report. Recommendations were provided in a straightforward and actionable manner. IFAD also guided the completion survey questionnaire and drafted independently an analytical impact assessment report which was used as a source for this PCR. Finally, IFAD and the project implementing unit specifically enjoy a good relation of mutual respect.

## **F.2. Government's performance**

185. *Borrower:* Government performance is rated satisfactory. The GoT has been proactive in deploying its functions during project design and implementation, in compliance with the Financing Agreement law covenants. The project steering committee was set-up in 2017 and met on a quarterly basis. PSC meetings were conveyed on a timely manner under the leadership of the SEPMU. The mission met with multiple agencies that had a seat in the project steering committee and all shared very positive views on the project. The Borrower provided timely counterpart funding and adequately addressed project supervision and implementation support recommendations throughout project life. Counterpart funding exceeded the initial appraisal target with 641% (design: USD\$ 447,000 – realization USD\$ 2,865,000) mostly under component 3. In addition, the Ministry of Finance played a vital role in following-up on the suspension and reimbursing ineligible expenditure that were generated due to the bankruptcy of the bank which contained the project's designated accounts.

## **F.3. Other partners' performance (including co-financiers)**

186. Just as LPDP, the project made substantial progress in developing and strengthening its relationship with non-governmental entities involved in project implementation. It effectively applied a lesson learned from LPDP-II and only used local service providers for the implementation of project activities namely Orion and Almar consulting. With both having been involved in LPDP, they were able to effectively use implementation procedures from the first phase. Both NGOs were able to quickly implement project activities with all targeted PMUs having been formed by 2018.

## **G. Assessment of sustainability**

187. The mission reviewed the LPDP-II exit strategy and found it satisfactory. It encompasses the entire project, and together with the institutional reforms undertaken by the government so as to secure the sustainability of the project – notably through adoption of the comprehensive improvements to the pasture law – ensures sustainability of the investments made by the project.

188. The vast majority of project funds (some 80%) and interventions relate to pasture development and their sustainability relates to the sustainability of PUUs. All 197 PUUs have been legally registered and are officially recognized by the government and local authorities. Due to the new pasture law as proposed and accepted under LPDP-II, their roles and responsibilities (institutional, legal and judicial) have been codified in national law. As PUUs do not own land 169 agreements and 84 certificates have been provided to them given them either a ten year or a long-term right to graze on the lands. Hence, the PUUs have a convincing asset to offer to PUU members. Also, PUUs were provided with mobile offices and appropriate office equipment such as bookcases, tables, chairs and IT material allowing them to manage the pastures. Most PUUs were established, and their land leases provided in 2018 and 2019. Consequently, LPDP-II had sufficient time to adequately train PUUs, monitor their progress and course correct.

189. During implementation, PUUs were trained and encouraged to mobilize resources from outside of the project, which is extremely important for possible scaling-up of their operations at the community level as well as financial sustainability. Due to the training, PUUs efficiently use their own resources to gather financial incomes. Since the beginning of project implementation, the income received by PUUs from agricultural machinery rental services totals TJS 3,642,244, and the total number of households that benefitted from tractor services for example was 30,933 in addition to membership fees. PUUs use these funds to employ on average 2-3 employees per and implement other priority projects at the village level, including the construction of bridges and watering points.

190. Outcome data also shows promising indications for sustainability. It indicates that membership payments are high among LPDP-II Compared to other types of village institutions, PUUs are 37% more likely to collect membership fees. Also in terms of other social cohesion indicators, PUUs score statistically significant better than their peers do. PUUs in treatment villages are 26% more likely to hold frequent meetings (every month or more frequently) and PUUs are 40% more likely to attract more than 50% participation rate.

191. *Environmental sustainability:* Impact assessment results show that LPDP-II beneficiaries exhibit significantly higher use pasture plans and rotation (52%) and significantly higher likelihood to access common pastures (42%) than the treatment group. The MTR mission recommended the PMU to intensify training of the PUUs highlighting the need to reduce pasture pressure in order to salvage carrying capacity and resilient ecosystems. The impact assessment indicates a laudable response by the PUUs to this adjustment: reduction in livestock units by 30% in comparison with the treatment group, significantly reducing the pressure on pastures and supporting the recovery of degraded areas and resilience of ecosystems. It serves to note that this reduction in

animals is offset by the improved productivity thus unequivocally also providing a positive net result for sustainable livelihoods. Given the above, there is an overall high-likelihood for environmental sustainability post project completion.

192. *Veterinary services*: Due to the strategic policy change in the Food Security Committee (FSC) by which the great majority of private veterinarians functioning in the project area came to be supported by the FSC, and thus assume also functions as public veterinarians, the project pivoted to support them. The impact assessment confirms that the level of services obtained from veterinarians has been maintained at a good level, in the same time as the cost of vet services has significantly decreased. The mission considers that the decrease in the cost of services is related to how the project has supported the mobility and service capacity in the project area. In general, decrease in the cost of services is strongly indicating sustainability in the continuation of the veterinaries' services to the beneficiary population.
193. *Sustainability of CIGs and WIGGs*: LPDP-II embedded a strategy for sustainability within the project approach. By amending the law on pasture management, it further institutionalized the duties and responsibilities of PUUs. This further harnessed as well as ensured their long-term sustainability from an institutional perspective. Output level monitoring as well as impact assessment results indicate that PUUs membership have a lot of ownership over their institutions with high involvement rates from their communities. Also, PUUs are able to generate resources from communities by offering mechanization services and membership fees. This ensures financial sustainability. CIGs/WIGGs were equipped with financial training and business training to ensure their financial sustainability. Vets remained to be paid by the FSC and hence there is an expectation that they remain present in the target area. Finally, the combination of a reduction in livestock units combined with increases in productivity provides an important entry point for environmental sustainability. Consequently, sustainability is rated 5, satisfactory.

## H. Lessons learned and knowledge generated

### Groasis Waterboxx

The introduction of Groasis Waterboxx and drip irrigation methods significantly saved water and other resources including fertilizer, labor costs, energy and pipelines. The project also learned that once the trees planted using Waterboxx are grown enough after 2-3 years, Waterboxx can be removed and used in other place to plant new trees. Additional support on Waterboxx in remote areas could be considered after cost-effectiveness and life-cycle analysis of Waterboxx.

### Pasture rotation

The establishment of PUUs, training of PUUs and introduction of CLPMPs, including pasture protection and pasture rotation, significantly reduce overgrazing, erosion, and restore carrying capacity and productivity of pasture. LPDP-II beneficiaries are more likely to use rotation plans on pastures and use pastures managed by PUUs. When the pastures are not being grazed, treatment villages are also more likely to work to restore them from degradation to prepare them for future grazing compared to the control group. LPDP-II beneficiaries are also better trained to independently assess the quality of pastures.

### Food security

In spite of the many challenges around rural development in Tajikistan, food insecurity and nutrition were not proven to be significant in the project area. Consequently, the project did not make a significant impact on these dimensions. Future designs should closer inspect the food security situation prior to including this explicitly in the project objectives.

### Mechanization

The provision of mechanized equipment to PUUs contributed to improving productivity of labour, enhancing fodder cultivation and conservation, and also improving communal infrastructures (roads). It also played a catalytic role in mobilizing communities for PUUs and pasture management initiatives, since equipment access was perceived as a direct and concrete benefit from the new PUUs membership. In addition, PUUs' ownership of equipment strengthened their sustainability through the collection of fees.

### Revisions of the Pasture Law and strategy

LPDP-II experience of the institutional arrangements and implementation of pasture management has informed revisions of the Pasture Law and strategy. This could determine future policy/ strategy on pastures nationally.

### Targeting strategy

Building upon approaches used by LPDP, the targeting strategy adopted of LPDP-II continued to successfully include poor men and women within vulnerable communities and households. Using a participatory approaches, a win-win situation of poverty reduction was created by offering them income generating opportunities as well as making them key drivers of project activities (e.g. improving the fodder base, demonstration plots).

### Women empowerment

Concerning women's empowerment, while the project remarkably increased women headed households' welfare, it was less effective in empowering women to make decisions jointly with men or separately over assets in beneficiary households. This is an important element to reflect on for similar future interventions in terms of the importance of factoring in the gender dimension and promote activities aimed at ensuring gender balance and women empowerment within beneficiary households.



## Livestock sector transformation

LPDP-II is in essence a geographical expansion of LPDP. Both projects are considered to be very successful and have been transformative for the livestock sector in Tajikistan. The combined implementation period for both projects is roughly 12 years. Hence in order to transform agricultural sectors in a country, it might be paramount to systematically address issues through follow-up projects.

## Climate change and natural resource management

LPDP-II promoted an ambitious innovation around climate change and natural resource management in particular pasture lands. With the revised Pasture Law and successful experience of establishing PUUs and developing CLPMPs, the system can be expanded and adopted in across the country.

## Communal pastures

Communal pastures often exhibit the so called tragedy of the commons, in which the stock rate on pastures is set too high because a household reaps private benefits from increasing their own herd on the common pastures, while the (higher) negative externality due to overgrazing because of such increase of the herd is distributed evenly between all members of the community. Thus, on communal pastures often the benefits in improved pasture carrying capacity and fodder production are eaten away by a commensurate increase in the stock rate on communal pastures. However, the LPDP-II has shown that working on all three of a) improved productivity (through improved breeds, expanded fodder production and better access to veterinary services); b) improved pasture management; and c) awareness raising on the effects of overgrazing and climate change may lead to self regulation at community level of the stock rate so as to maintain the grazing pressure in balance with pasture carrying capacity. The significant increase in productivity and decrease in the stock rate indicates of this.

## I. Conclusions and recommendations

194. Overall, the project succeeded in: (i) scaling up the PUU model and successfully establishing 197 PUUs, (ii) providing the PUUs with 169 agreements and 84 certificates (lii) revising the pasture law and assuring that pasture groups are better established, (iv) providing income generating activities through WIGGs and CIGs to poor community members, (v) offering artificial insemination techniques and improving animal productivity and animal health, (vi) strengthening the academic system around pasture in Tajikistan, (vi) strengthening the fodder base and (vii) successfully implementing CLPMPs.

195. The goal formulated for LPDP-II was to contribute to the reduction of poverty in Khatlon Oblast. The development objective was to increase the incomes, resilience and nutritional status of around 38 000 poor households by enhancing livestock productivity and climate resilience in a sustainable manner. Output data shows that LPDP-II was able to reach out to 51,391 households (HHs). Impact assessment data shows that it was able to increase livestock incomes with 109% and that LPDP-II beneficiaries faced less climate related shocks. Through a combination of capacity building, pasture development and productivity support, LPDP-II was able to increase the climate resilience of 51,391 beneficiaries.

196. In terms of nutrition, the internal logic of improving nutrition was that through improved livestock productivity and incomes, beneficiaries would increase the auto-consumption of livestock products and generate more incomes to buy nutritious foods on markets. Impact assessment data shows an increase in income (109%), weight of cattle (30%) and milk production (120%) and productivity per animal (99%). However, there was no impact on the nutritional status of LPDP-II households as per the IA. Namely, the LPDP-II households as well as control groups were already nutrition secure.

197. LPDP-II embedded a strategy within project activities in order to ensure sustainability. PUUs allow for a decentralized method of pasture management driven by communities. The amended law on pasture management further institutionalized duties and responsibilities of PUUs. Output level monitoring as well as impact assessment results indicate that PUUs membership have a lot of ownership over their institutions with high involvement rates from their communities. Also, PUUs are able to generate resources from communities by offering mechanization services and membership fees. This ensures financial sustainability. Finally, the combination of a reduction in livestock units combined with increases in productivity provides an important entry point for environmental sustainability.

198. LPDP-II enhanced the capacity of targeted public sector and community organizations to be more effective and efficient at pro-poor pasture management development by providing technical support to the PMT and TUA. Resulting, the PMT was able to deploy an inclusive process and change the national pasture law. The projects increased access to livestock and veterinary services by strengthening the capacities of the FCS and veterinarians in the project areas. It also improved fodder supply for smallholder producers through fodder initiatives. Resulting there was better use of preventive treatment on livestock. Also, livestock in LPDP-II targeted areas was more likely to be in stalls and to drink from boreholes. This decreases mortality and increased productivity of sheep/goat flocks and cattle herds due to a reduced incidence and prevalence of diseases. Finally, LPDP-II increased access to more productive and climate resilient pasture areas due to the well managed PUUs as well as effective CLPMPs. The mid term review's recommendations to reduce grazing pressure on pastures substantially helped to improve the long term prospects of sustainable livelihoods: the technical assistance programme managed by the PMU helped to reduce the livestock headcount with 30% with the treatment group. LPDP-II also diversified income-generating opportunities for livestock communities through a sustainable resulted in community-led management of natural resources.



## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 1: Project logical framework**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
Loan ID 2000001439  
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Near East, North Africa and Europe Division  
Programme Management Department

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## Livestock and Pasture Development Project II

### Logical Framework

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
Outreach	1.b Estimated corresponding total number of households members										
	Household members			239 400	32 091	426 997	178.361				
	1.a Corresponding number of households reached										
	Women-headed households			3 192	370	4 343	136.1				
	Non-women-headed households			34 808	1 449	47 048	135.2				
	Households			38 000	1 819	51 391	135.2				
	1 Persons receiving services promoted or supported by the project										
	Males			122 094	22 182	221 094	181.1				
	Females			117 306	9 909	205 903	175.5				
	Total number of persons receiving services			239 400	32 091	426 997	178.4				
	Poor smallholder household members supported in coping with the effects of climate change										
	Females			95 000	3 916	95 992	101				
	Males			95 000	5 174	97 913	103.1				
	Total household members			190 000	9 090	193 905	102.1				

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
<b>Project Goal</b> Contribute to the reduction of poverty in Khatlonr region (50% of people in Khatlon are estimated as being below the poverty line)	variation/increase in household assets income for 18 000 household in the project area										A sound use of climate change vulnerability assessment informs and drives adaptation work; risk mitigation management plans are implemented by targeted communities; elite capture of a disproportionate amount of the gains from increased production and local level conversion of animal, milk and meat surpluses sold on the market and the processors (R). A political stability and conducive macro economic framework; Commitment and cooperation among all concerned institutional partners; influence of overall economic development concealing project achievements (R);
	increase in household assets income - Percentage (%)			15		19	126.667				

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
<b>Development Objective</b> Increase the nutritional status, incomes and resilience of poor households by enhancing livestock productivity in a sustainable manner	Average HH income increase from livestock for 80% of population										A sound use of climate change vulnerability assessment informs and drives adaptation work; Risk mitigation management plans are implemented by targeted communities; Elite capture of a disproportionate amount of the gains from increased production and local level conversion of animal, milk and meat surpluses sold on the market and the processors (R). A sound use of climate change vulnerability assesement informs and drives adpatation work; Risk mitigation management plans are implemented by targeted communities; Elite capture of a disproportionate amount of the gains from increased production and local level conversion of animal, milk and meat surpluses sold on the market and
	Income increase in TJS			3 372	7 337	7 337	217.586				
	Number of targeted HH reporting increased income from livestock										
	Targeted households	0		3 250	0	9 413	289.6				
	Number poor smallholder households whose climate resilience has been increased										

Results Hierarchy	Indicators							Means of Verification		Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility
	Households	0		38 000	1 819	51 391	135.2			

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
<b>Outcome</b> Outcome 1: Targeted public sector and community organisations (disaggregated by type, i.e. PUUs, Vos, MoA, Pasture Department, TAU, Jamoats) are more effective and efficient at pro-poor pasture management	% of PPUs declaring satisfactory levels of governance										Favourable government policies and cross-sectoral cooperation between state, region and district authorities; Interest and motivation among community members, Lack of capacity in government agencies and communities to effectively participate in project activities and transmit information and know how.
	PPUs			75		75	100				
<b>Output</b> Output 1.1 PUU are enabled to develop and implement climate risk-mitigation community pasture plans incorporating needs and priorities of poor and women 180 of land use rights agreements obtained by PUUs that reduce disputes regarding access to pastures by 50%;	Community groups engaged in NRM and climate risk management activities								Quarterly		
	Groups	0		180	0	197	109.444				
	Group members - females	0		378	0	489	129.365				
	Group members - males	0		882	0	1 143	129.592				
	Group members - total	0		1 260	0	1 632	129.524				
	% of the PPUs Board with at least 30% women representation										
	PPUs Boards	0	30.02	22.5	0	30	133.3				
	CIGS supported (crops)										

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
	Total size of CIGs supported	0		3 000	0	3 586	119.5				
	Women in leadership position	0		0	0	0					
	Number of CIGs supported	0		150	0	173	115.3				
	CIGs supported (sheepbreeding)										
	Total size of CIGs supported	0		3 250	0	9 413	289.6				
	Number of CIGs supported	0		50	0	146	292				
	Women in leadership position	0		0	0	0					
	Number of land use rights agreements obtained by PUUs										
	Land titles - Agreements	0		180	8	169	93.9				
	Land titles - Certificates	0		80	20	84	105				
Output Output 1.2 PUUs acquired planning and technical skills to implement sustainable pasture management and livestock production;	Number of people benefitting of training or study tours, (women 30%).										
	Number of people	0		5 400	325	12 675	234.722				
	Women	0		30	34	34	113.333				
	Number of trainings										



Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
	Number of trainings held	0		326	36	661	202.8				
<b>Output</b> Output 1.3 Increase in pasture fees collected by the end of the project	% variation in pasture fees amount										
	Variation (increase)	0	20	20	20	20	100				
<b>Output</b> Output 1.4 Public institutions involved in pasture management are strengthened (PUUs, VOs, MoA, Pasture Department, TAU, Jamoats)	Number of public institutions assisted/receiving training										
	Public Institutions	0		1	0	1	100				
<b>Output</b> Output 1.5 Improved Pasture Law and related legislation proposed/passed;	Improved Pasture Law and related legislation passed										
	Pasture Law approved	0	0	1	0	1	100				
<b>Output</b> Output 1.6 Sustainable Pasture Management curriculum is taught in Tajik Agrarian University.	Number of curriculum taught in Tajik Agrarian University										
	Sustainable Pasture mgt curriculum taught	0		1	0	1	100				
<b>Outcome</b> Outcome 2: Healthier livestock with lower levels of mortality and increased supplementary feed available to community livestock	Livestock households reporting reduction in animal mortality							"Baseline, mid-term, completion surveys, project M&E records, progress reports "			
	Livestock households reporting reduction in animal mortality	0		70		0	0				
	15% increase in average milk yields							"Baseline, mid-term, completion surveys, project M&E records, progress reports "			
	Milk Ltrs	3.2		3.7	7	7	189.2				
	10% increase in average weight of cattle, sheep goats										
	Cattle			100	205	205	205				

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
	10% increase in average weight of cattel, sheep, goats sold in local markets										
	Sheep	0.05		51.7	45	45	87				
	10% increase in average weight of cattle, sheep, goats sold in local markets										
	Goats	0.05		49.5	29	29	58.6				
	1.2.2 Households reporting adoption of new/improved inputs, technologies or practices							COI Survey	BL, MT, End	PMU- Service provider	
	Total number of household members										
	Households			70							
	Households			2 100		27 237	1 297				
<b>Output</b> Output 2.1 Capacity for sustainable and efficient livestock production built.	number of beneficiary HH trained in improved livestock husbandry practices							CF/TA Reports Progress Reports Veterinarians logbooks Annual Reports Case studies			Communities willing to participate in the project activities; Govt support is favourable
	Households			5 000	104	5 171	103.42				
	1.1.3 Rural producers accessing production inputs and/or technological packages							CF/TA Reports Progress Reports Veterinarians logbooks Annual Reports Case studies CF/TA Reports Progress Reports Veterinarians logbooks Annual Reports Case studies			
	Males			2 100		1 125	53.6				
	Females			900		1 125	125				
	Total rural producers			3 000	5	2 255	75.2				
	Number of business plans prepared and which received financing										
	Business Plans			20	0	97	485				

Results Hierarchy	Indicators							Means of Verification		Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility
<b>Output</b> Output 2.2 Private vets provide animal health and production services on a sustainable basis	Number of veterinarians trained and equipped							CF/TA Reports Progress Reports Veterinarians logbooks Annual Reports Case studies		
	Males			60	0	60	100			
	Females			0	0	0				
<b>Outcome</b> Outcome 3: Household resilience increase through sustainable use of pastures and income diversification	% income increase of beneficiaries households from alternative income activities (ASAP)							"Baseline, mid-term, completion surveys, Project M&E records, progress reports "		
	Income increase			20		113	565			
<b>Output</b> Output 3.1: Resilient and sustainable investments prioritized in CLPMPs completed and functioning.	number of PPU's implementing CLMP plans							"Baseline, mid-term, completion surveys, Project M&E records, progress reports "		Communities willing to participate in the project activities; Govt support is favourable
	Number of plans implemented			180	0	197	109.444			
	Number of plans developed			180	0	197	109.444			
	Number of subprojects approved/financed of PPU's (by priorities, first, second and set)									
	Number of sub-projects			180	320	600	333.3			
	Number of approved CLPMP in the Project areas (including LPDPI's PPU's) effectively integrating climate risk mitigation and adaptation measures (ASAP)									
	# of approved CLPMP			180	0	197	109.4			
	Number of HH with access to infrastructure that is climate resilient & environ sound									
	Households			18 000	850	18 696	103.9			
	Land under climate-resilient practices									
	Land area			95 000	20 383	95 037	100			

Results Hierarchy	Indicators							Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Annual Result (2021)	Cumulative Result (2021)	Cumulative Result % (2021)	Source	Frequency	Responsibility	
<b>Output</b> Output 3.2 Alternative income generating activities supported to enhance risk coping mechanisms	2.1.3 Rural producers’ organizations supported										Communities willing to participate in the project activities; Govt support is favourable
	Total size of POs			0	660	1 559					
	Rural POs supported			22	126	261	1 186.364				
	Males			0	0	0					
	Females			0	660	1 559					
	Rural POs supported that are headed by women			22	126	261	1 186.364				
	Number of grants disbursed to new enterprises established										
	Number of grants			22	126	261	1 186.4				

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 2: Summary of amendments to the financing agreement**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
Loan ID 2000001439  
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Near East, North Africa and Europe Division  
Programme Management Department

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## Appendix 3: Actual project costs

### Project Costs and Financing

1. The total costs were estimated to be US\$ 27,041 million (US\$ 26,9 million actualized as of today +current remaining pending balance of US\$0,053 million to be spend in September 2021). The total project cost of US\$ 27,041 million was financed through IFAD amount equivalent to US\$ 17,390 million (IFAD loan US\$8,712 and IFAD Grant of US\$8,677 million), of which US\$0,053 millions of IFAD Grant pending disbursement for September 2021; ASAP Grant of about US\$5,098 million, Government Contribution of about US\$ 2,865 million and beneficiaries' participation of US\$ 1,689 million equivalent.

2. The table 1 and 2 below compares expected with actual Government and beneficiary contributions, showing a large increase over the project lifetime, in the case of Government up to 541 % and increase of 25% in the case of beneficiaries' contribution. See table 1 for more details.

**Table 1. Fund Utilization per Component (US\$) and Financier (Up to 30 September 2021)**

Components	IFAD Loan			IFAD Grant			ASAP Grant			Government			Beneficiaries			Total		
	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
1. Institutional Development	0			1.31 3	1.4 01	10 7	153	147	96	126	36	29%	269	12	4	1.86 1	1.5 95	86
2. Productivity Enhancement	0			1.87 1	1.7 55	94	0			190	4	2%	184	121	66	2.24 5	1.8 80	84
3. Pasture Development	8.70 0	8.7 12	10 0	4.00 2	4.5 06	11 3	4.88 2	4.9 51	10 1	23	2.8 16	122 43%	895	1.5 56	17 4	18.5 02	22. 540	12
4. Project Management	0			1.51 4	1.0 16	67	0			108	10	9%	0			1.62 2	1.0 25	63
<b>Total</b>	<b>8.70 0</b>	<b>8.7 12</b>	<b>10 0</b>	<b>8.70 0</b>	<b>8.6 78</b>	<b>10 0</b>	<b>5.03 5</b>	<b>5.0 98</b>	<b>10 1</b>	<b>447</b>	<b>2.8 65</b>	<b>641</b>	<b>1.34 8</b>	<b>1.6 89</b>	<b>12 5</b>	<b>24.2 30</b>	<b>27. 041</b>	<b>11 2</b>

Source: PMU Financial Records, September 2021

**Table 2. Government and beneficiaries' Contribution (US\$ ' 000)**

Government Contributions (in US\$)		
Expected Contributions at design	Total Govt. Contribution (actual)	% (against expected)
0.447	2.865	641%
Beneficiaries contributions (in US\$)		
Expected Contributions at design	Actual	% (against expected)
1.348	1.689	125%

Source: Project Design Report, 2016 and PMU source, 2021

3. There was some slight divergence in the expenditure from the original design budget envisaged in the project design. The original Project design reflected total project costs of US\$ 24,230 million while actualized US\$27,041 million until the end of September 2021.

4. Although the Project was completed largely to design and on time, actual expenditures estimated to complete the Project are estimated at US\$ 27,041 million, equivalent to about 112% of the original budget (US\$24,230 million) (see tables 1,3,4,5,6 and 7 for more details).

5. The project monitored costs not only by Financier but also by components. Table 1 and 5 presents the project expenditures by component and Financier as of 30 September 2021. Due to the redistributed activities, the total financial achievement for the project was 112% of its budgeted amount equivalent to US\$ 27,041 million, of which component 1 was 86% of its budgeted amount (appraisal US\$ 1,861 vs actual US\$ 1,595 million), Component 2; 84% ( appraisal US\$ 2,245 vs US\$ 1,880 million), Component 3; 122% ( appraisal US\$ 18,502 vs US\$ 22,540 million) and Component 4; 63% ( appraisal US\$ 1,622 vs US\$ 1,025 million). The component 3 Pasture Development accounted with the

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 3: Actual project costs**

Mission Dates: 23 August - 03 September 2021  
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## Appendix 3: Actual project costs

### Project Costs and Financing

**Table 1. Initial projected disbursements and actual disbursements, by Financier (US\$'000)**

Financier	Appraisal	Actual Disbursement	Balance	%
IFAD loan	8 700	8 712	-12	100%
IFAD grant	8 700	8 678	22	100%
ASAP grant	5 035	5 098	-63	101%
Government	447	2 865	-2 418	641%
Beneficiaries Contribution	1 348	1 697	-349	126%
<b>Total</b>	<b>24 230</b>	<b>27 050</b>	<b>-2 820</b>	<b>112%</b>

1. By the end of the project total costs from all financiers were US\$ 27.05 million. The total project cost of US\$ 27.05 million was financed through IFAD amount equivalent to US\$ 17.39 million (IFAD loan US\$ 8.712 million and IFAD Grant of US\$8.678 million); ASAP Grant of about US\$ 5.098 million, Government Contribution of about US\$ 2.865 million and beneficiaries' participation of US\$ 1.697 million equivalent.

2. The table 2 and 3 below compares expected with actual Government and beneficiary contributions, showing a large increase over the project lifetime, in the case of Government up to 641 % and increase of 25% in the case of beneficiaries' contribution. See table 2 for more details.

**Table 2. Fund Utilization per Component (US\$'000) and Financier (Up to 30 September 2021)**

Components	IFAD Loan			IFAD Grant			ASAP Grant			Government			Beneficiaries			Total		
	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
1. Institutional Development	-	-	-	1313	1402	107%	153	147	96%	126	36	29%	269	12	4%	1861	1597	86%
2. Productivity Enhancement	-	-	-	1871	1755	94%	-	-	-	190	4	2%	184	121	66%	2 245	1880	84%
3. Pasture Development	8 700	8 712	100%	4 002	4 506	113%	4 882	4 951	101%	23	2 816	12243%	895	1564	174%	18 502	22 549	122%
4. Project Management	-	-	-	1514	1014	67%	-	-	-	108	10	9%	0			1622	1024	63%
<b>Total</b>	<b>8 700</b>	<b>8 712</b>	<b>100%</b>	<b>8 700</b>	<b>8 678</b>	<b>100%</b>	<b>5 035</b>	<b>5 098</b>	<b>101%</b>	<b>447</b>	<b>2 865</b>	<b>641%</b>	<b>1 348</b>	<b>1 697</b>	<b>125%</b>	<b>24 230</b>	<b>27 050</b>	<b>112%</b>

Source: PMU Financial Records, September 2021

**Table 3. Government and beneficiaries' Contribution (US\$'000)**

Government Contributions (in US\$)		
Expected Contributions at design	Total Govt. Contribution (actual)	% (against expected)
447	2 865	641%
Beneficiaries contributions (in US\$)		
Expected Contributions at design	Actual	% (against expected)
1 348	1 697	125%

Source: Project Design Report, 2016 and PMU source, 2021

3. There was some slight divergence in the expenditure from the original design budget envisaged in the project design. The original Project design reflected total project costs of US\$ 24.23 million while actualized US\$27.05 million until the end of September 2021.

4. Although the Project was completed largely to design and on time, actual expenditures utilized to complete the Project are US\$ 27.05 million, equivalent to about 112% of the original budget (US\$24.23 million).

5. The project monitored costs not only by Financier but also by components. Table 2 and 6 presents the project expenditures by component and Financier as of 30 September 2021. Due to the redistributed activities, the total financial achievement for the project was 112% of its budgeted amount

equivalent to USD\$27.05 million , of which component 1 was 86% of its budgeted amount (appraisal US\$ 1.861 million vs actual US\$ 1.597 million), Component 2; 84% ( appraisal US\$ 2.245 million vs US\$ 1.88 million), Component 3; 122% ( appraisal US\$ 18.502 million vs US\$ 22.540 million) and Component 4; 63% ( appraisal US\$ 1.622 million vs US\$ 1.024 million). The component 3 Pasture Development accounted with the highest expenditure equivalent to 83 percent of the total project costs. The other components required smaller part of financing: Component 1 with 6%; Component 2 of 7% and Component 4 with 4%. It has been noticed that the only component with required higher financial resources than planned is for Component 3 while other components reduced their financial expenditure according to planned values.

6. At the PDR phase has been reflected the use of IFAD Grant and Loan in the different project components: Institutional Development component (71%); Productivity Enhancement component (83%); Pasture Development component (69%); and Project Management (93%). With an initially estimated 38,000 beneficiary households in the target group, the cost per households planned was about US\$638. The actual reallocation of the costs during project completion and across each component is estimated to be about US\$ 526 for 51 391 households, which reflects lower actual costs per household.

7. Nonetheless, actual reallocation of the IFAD Grant and Loan across each component/subcomponent is the following: Institutional Development component (88%); Productivity Enhancement component (93%); Pasture Development component (59%); and Project Management (99%). Overall IFAD financing share of the total costs has been reduced (although in absolute values stayed almost the same) when compared with design. The largest switch according to appraisal was in Component 1 Institutional Development where IFAD took over larger part of financing (from 71% to 88%). The only component where other financier increased financing was component 3 Pasture Development, but IFAD remain the main financier with 59% of the total project share (appraisal 69%). See table 4 for more details.

**Table 4. Total IFAD Appraisal vs Actual costs and IFAD ratio of total costs per Component (USD'000 / %) (Up to 30 September 2021)**

Components	Appraisal	Actual	%	IFAD share (appraisal)	IFAD share (actual)
1. Institutional Development	1 313	1 402	107%	71%	88%
2. Productivity Enhancement	1 871	1 755	94%	83%	93%
3. Pasture Development	12 702	13 218	104%	69%	59%
4. Project Management	1 514	1 014	67%	93%	99%
<b>Total</b>	<b>17 400</b>	<b>17 390</b>	<b>100%</b>	<b>72%</b>	<b>64%</b>

*Source: PMU Financial Records, September 2021*

8. As reflected in table 5, at the appraisal phase domestic financing (Government and Beneficiaries) was estimated at US\$ 1.795 million while actualized higher amount of US\$ 4.562 million (254 percent of initially planned value). The international financing is aligned with initial appraisal phase (100%). It has been estimated that for every IFAD dollar invested in the project, Domestic contribution was 17 cents and for each IFAD dollar invested, there was other 36 cents from others financier (i.e. ASAP, GoT and Beneficiaries).

9. Government contribution is much higher than initially planned (US\$ 0.447 million appraisal; actual US\$ 2.865 million) mostly in Component 3 'Pasture Development' due to the majority of VAT exemption through agricultural machineries imported, followed by rent offices, constructions and others.

10. In-kind contribution from the Government from the beginning of the project implementation up to 30<sup>th</sup> of June 2021 was as follows; (1) US\$ 0.561 million for custom duty exemption from imported goods and (2) US\$ 0.103 million in the form of office provision (these figures are not included in the cost tables included in this appendix).

**Table 5. Domestic vs International contribution at appraisal and actual phase (US\$'000)**

Contribution	Appraisal	Actual	%
Domestic	1 795	4 562	254%
International	22 435	22 487	100%
<b>Total</b>	<b>24 230</b>	<b>27 050</b>	<b>112%</b>

Source: PMU Financial Records, September 2021

**Table 6. Fund Utilization per Component/subcomponent (USD'000) and Year (Up to 30 September 2021)**

Code	Components	2016	2017	2018	2019	2020	2021(January-September)	Total
<b>1</b>	<b>Institutional Development</b>	<b>132</b>	<b>378</b>	<b>535</b>	<b>100</b>	<b>160</b>	<b>291</b>	<b>1 597</b>
.1.1	Development of COs	132	266	248	39	47	248	979
.1.2	Advancement of Policy and Legal Framework and Strengthening National Institutions	-	113	288	60	114	43	617
<b>2</b>	<b>Productivity Enhancement &amp; Improved Animal Health</b>	<b>-</b>	<b>375</b>	<b>470</b>	<b>241</b>	<b>500</b>	<b>294</b>	<b>1 880</b>
.2.1	Livestock Productivity Engagement	-	368	329	226	166	8	1 097
.2.2	Improved Animal Health	-	7	141	16	334	286	783
<b>3</b>	<b>Pasture Development and Diversification for Vulnerability Reduction</b>	<b>5</b>	<b>2 714</b>	<b>6 931</b>	<b>4 259</b>	<b>5 247</b>	<b>3 395</b>	<b>22 549</b>
.3.1	Community Resilient Pasture Management and Investments	5	2 680	6 484	4 239	5 246	3 324	21 979
.3.2	Income Diversification	-	34	447	20	1	71	573
<b>4</b>	<b>Project Management</b>	<b>19</b>	<b>140</b>	<b>184</b>	<b>224</b>	<b>226</b>	<b>229</b>	<b>1 024</b>
	<b>Total</b>	<b>156</b>	<b>3 608</b>	<b>8 120</b>	<b>4 824</b>	<b>6 134</b>	<b>4 209</b>	<b>27 050</b>

Source: PMU Financial Records, September 2021

11. As noted in table 7, the expenditure category with the highest amount of the total actual costs is 'CLPMP Grants' with the total amount of US\$ 21.581 million ( 124% of initially planned value); followed by 'Equipment's, Goods, Vehicles and Works' of US\$ 2.292 million ( 89% of initially planned value); 'Technical Assistance and Studies' of US\$ 1.569 million ( 73% of initially planned value); 'Diversification Grants' of US\$ 0.573 million (115% of initially planned value); 'Operating expenses' of US\$ 0.508 million ( 54% of initially planned value); 'Other grants' of US\$ 0.460 million ( 98% of initially planned value); and 'Training and Workshops' of US\$ 0.066 million (40% of initially planned value).

#### Cost-efficiency

12. The cost per outcome has been estimated as follows:

- Actual cost per outcome 1 'Institutional Development' is US\$ 1.597 million (vs appraisal US\$ 1.861 million, i.e. decrease of 14 percent)
- Actual cost per outcome 2 'Productivity Enhancement' is US\$ 1.880 million (vs appraisal US\$ 2.245 million, i.e. decrease of 16 percent)
- Actual cost per outcome 3 'Pasture Development' is US\$ 22.549 million (vs appraisal US\$ 18.502 million, i.e. increase of 22 percent)

13. The cost per household for each outcome has been materialized as follows:

- The cost per household for outcome 1 'Institutional Development' is US\$ 31 dollars for 51 391 HH with total cost of US\$1.595 million (vs appraisal US\$ 49 dollars for 38 000 HH).
- The cost per household for outcome 2 'Productivity Enhancement' is US\$ 144 dollars for 13 059 HH (vs appraisal US\$ 356 dollars for 6 310 HH)

**Table 7. Fund Utilization per Expenditure Category and Financier (USD) (Up to 30 September 2021)**

Components	IFAD Loan			IFAD Grant			ASAP Grant			Government			Beneficiaries			Total		
	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
1.Equipment, Goods, Vehicles and Works	-	-	-	2.048	2.136	104%	-	-	-	364	39	11%	154	117	76%	2.566	2.292	89%
2.Technical Assistance and Studies	-	-	-	1.680	1.411	84%	203	147	72%	-	10	-	269	-	0%	2.152	1.569	73%
3.Training and Workshops	-	-	-	164	66	40%	-	-	-	-	-	-	-	-	-	164	66	40%
4a. CLPMP Grants	8.700	8.712	100%	3.494	4.112	118%	4.358	4.453	102%	-	2.767	-	871	1.539	176%	17.423	21.581	124%
4b. Diversification Grants	-	-	-	-	-	-	475	498	105%	-	49	-	24	26	106%	499	573	115%
4c. Other Grants	-	-	-	440	444	101%	-	-	-	-	-	-	30	16	52%	470	460	98%
5.Operating Expenses	-	-	-	874	508	59%	-	-	-	82	-	0%	-	-	-	956	508	54%
6.Unallocated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>8.700</b>	<b>8.712</b>	<b>100%</b>	<b>8.700</b>	<b>8.678</b>	<b>100%</b>	<b>5.036</b>	<b>5.098</b>	<b>101%</b>	<b>446</b>	<b>2.865</b>	<b>642%</b>	<b>1.348</b>	<b>1.697</b>	<b>125%</b>	<b>24.230</b>	<b>27.050</b>	<b>112%</b>

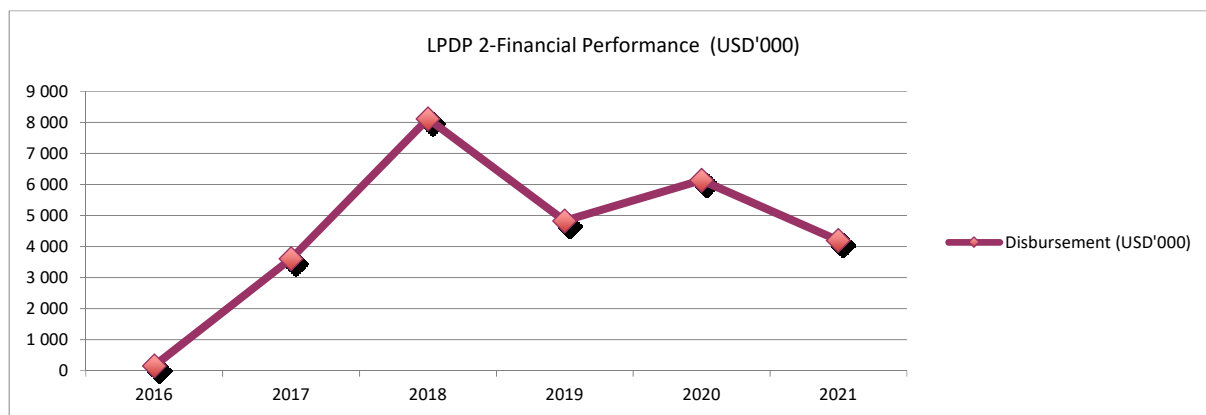
- c) The cost per household for outcome 3 'Pasture Development' is US\$ 1 113 for 18 000 HH (vs appraisal US\$ 1,028 dollars for 18 000 HH).

14. The profitability analysis carried out by the PCR of sample activities showed profitable operations at various degrees. Also, the benefit-cost analysis of the sample CLPDP exhibited attractive benefit-cost ratios. Sensitivity analysis showed that all of these CLPDP were economically viable in all project areas. Several factors can affect financial performance such as input prices, weather, pandemic, external shocks, access to markets, etc. Despite the issues related to implementation, sample activities showed economic viability, the inputs were utilized efficiently, disbursements were relatively timely and actual costs were aligned with estimated cost at appraisal, although noted that Component 3 slightly exceeded appraisal amount, while Components 1, 2 and 4 decreased in the absolute value compared to design phase estimation. The realized beneficiary contribution was slightly higher than at appraisal phase by 25 percent (appraisal US\$ 1.3 million vs actual US\$ 1.6 million) mostly under component 3. Actual Government contribution largely exceeded appraisal estimates (appraisal US\$ 0.4 vs actual US\$2.9 million) reflecting increase for 641 percent overall. This validation rates the project to be efficient.

15. Infrastructure costs were realized under sub-component 3.1. which amounted to US\$ 21.979 million for all 18,696 HH that gained access to infrastructure (equipment, water points; shelter; storage; pasture connectivity roads) which indicates that average infrastructure cost per household is lower than US\$ 1 175. At appraisal, under component 3.1, infrastructure cost was estimated at US\$ 17.953 million for a target of 18,000 HH, therefore average infrastructure cost per household was lower than US\$ 997.

16. Graph 1 shows actual spending per year; during the first three years, the project has utilized 44% of total project costs for an amount of US\$ 11.9 million. In the last three years, 56% was utilized from total project cost for an amount of US\$15.2 million. The highest spending was recorded at the middle of the project period in 2018 for an amount of US\$ 8.1million which forms 30% of total project cost.

**Graph 1. Financial Performance over Project Implementation period**



## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 4: Project internal rate of return (detailed analysis)**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
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DSF Grant ID 2000001438

Near East, North Africa and Europe Division  
Programme Management Department

This document will be publicly disclosed unless there is written dissent on its disclosure by the Borrower at the time of this document submission to IFAD or no later than the project closing date.





## Appendix 4: Project internal rate of return (detailed analysis)

### I. INTRODUCTION AND BACKGROUND

1. The Livestock and Pasture Development Project (LPDP, Phase II) was implemented in the Republic of Tajikistan from 2016 to 2021. The programme targeted selected districts of Khatlon region, which is one of the poorest regions of the country. LPDP Phase II is geographical extension to five more districts in the region: Dangara, Farkhor, Hamadoni, Kulob and Vose. The development goal of the Project is to contribute to the reduction of poverty in Khatlon region. The development objective is to increase the nutritional status and incomes of around 38 000 poor households by enhancing livestock productivity and climate resilience in a sustainable manner. The project reached more than planned, in total 51 391 HH (increased in 35% compared to initial target).

2. The Programme achieved increased household incomes for families involved in livestock productivity in a poor districts through: a) established 197 PUUs (initially planed 180) and developed community livestock pasture management plan (CLPMP) and pasture rotation plan for PUUs; b) 84 PUUs with pasture land use certificate (appraisal 80) and 169 PUUs with pasture land lease agreement (appraisal:180); c) 319 Common Interest Groups (CIGs) established of which 146 livestock production group formed (appraisal 50) and 173 crop production group formed (appraisal 150); d) 261 Women Income Generating Group (WIGG) established (appraisal 22); and e) 661 trainings provided (appraisal 36).

Table 1. CIG and WIGG activities

Activity	HH	Beneficiaries *	Groups
CIG			
Fodder Production	3.586	29.764	173
Improved Livestock Group	9.413	78.128	146
<b>Total</b>	<b>12.999</b>	<b>107.892</b>	<b>319</b>
WIGG			
Beekeeping	295	2.449	74
Turkey breeding	1.057	8.773	167
Milk Processing	87	722	8
Rosehip	120	996	12
<b>Total</b>	<b>1.559</b>	<b>12.940</b>	<b>261</b>
<b>Total (CIG+ WIGG)</b>	<b>14.558</b>	<b>120.831</b>	<b>580</b>

Source: PMU, August 2021

(\*average family size of around 8,3)

3. The Project had three principal inter-related investment components as well as the required support for Project management and implementation as follows: (i) Institutional Development, with two sub-components: Development of Community Organizations; and Advancement of Policy and Legal Framework and Strengthening National Institutions; (ii) Productivity Enhancement and Improved Animal Health, with also two sub-components: Livestock Productivity Enhancement; and Improved Animal Health; (iii) Pasture Development and Diversification for Vulnerability Reduction with also two sub-components: Community Resilience Pasture Management and Investments and Income Diversification and (iv) Project Management, with two sub-components: Project Management; and Monitoring and Evaluation.

4. The programme supported component 1 “Institutional Development” through activity of enhancing the capacity of targeted public sector and Community Organization for more effective and efficient pro-poor pasture management development where the following achievement occurred in subcomponent 1.1 Development of Community Organizations:

a) Established 197 Pasture Users Union (PUU) (appraisal:180; achievement 109%); b) 51 391 PUU members (HH) reached (appraisal:38 000; achievement 135%); c) 1 632 people in community groups formed/strengthened as members of Board (appraisal: 1260; achievement 130%); d) 489 women in PUU Board (appraisal:378, achievement 129%); e) 173 CIG crop productions groups formed (appraisal:150, achievement 117%), totaling 3586 people reached (appraisal:3000, achievement 120%); f) 146 CIG livestock production groups formed (appraisal:50, achievement 292%), totaling 9 413 people reached (appraisal:3250, achievement 290%); g) 261 Women Income Generating Groups

(WIGG) established in crop/livestock production with women in leadership positions (appraisal:22, achievement 1186%), totaling 1559 women (appraisal:220, achievement 709%); h) 12 675 people ( of which 4 242 women) benefitted from training or study group (appraisal:5 440, achievement 229%); i) 661 training provided (appraisal:326, achievement 192%); j) 169 pasture use agreements established of which 84 with pasture use certificate obtained (appraisal:180/80, achievement 94%/105%) on total land area of 95 037 ha ( of which 70 542 ha with pasture use agreements and remaining 24 495 ha with pasture use certificated obtained).

5. Subcomponent 1.2 “Advancement of Policy and Legal Framework and Strengthening National Institutions” resulted in the following achievement occurred:

a) Strengthened public institutions; b) Improved Pasture Law and related legislations proposed/passed; c) Strategy incorporating climate change prepared and passed; d) Curriculum thought in Tajik Agrarian University (TAU), as result 60 scholarship were provided in 2019-2020 academic year within faculties of agronomy, horticulture and agricultural biotechnology, veterinary medicine and zoo engineering; e) 2 undergraduates of the Faculty of Zooengineering were supported under the Project with goal to develop the livestock sector and pastures and to conduct research; f) books and teaching materials, including a manual on graduation thesis and internship, a guide for independent work of students in agronomy (soil agrophysics) “Pasture Management”, “Guide for pasture keepers”, “Guidelines for the implementation of course work on the subject of natural pastures” Textbook on pastures “What can be known about pasturelands”, Textbooks “Soil processing”, “Cultivation Systems” were published and provided to TAU with the goal to support the new specialty of TAU; g) rehabilitated buildings of Pasture Meliorative Trust (PMT) under Ministry of Agriculture with necessary equipment 2 vehicles and training provided, as result in five interns/students were assigned to the PMT which led to permanent employment; h) establishment of PUU and Commissions on pastures use regulation have been conducted in 9 villages of Norak district, 16 villages of Rasht district and 14 districts of Tojikobod district; i) established 7 PUUs at 7 villages in Norak district, 4 PUUs at 4 villages in Rasht district and 3 PUUs at 3 villages in Tojikobod district due to the improvement the Law of the Republic of Tajikistan “On pasture” based on instruction of the Government of the Republic of Tajikistan.

6. The programme supported component 2. “Productivity Enhancement and Improved Animal Health” with the key objective to increase access to livestock and veterinary services, and fodder supply for stallholder producers, aiming at decreased mortality and increased productivity of sheep/goat flocks cattle herds, where the following achievement occurred in subcomponent 2.1 Livestock Productivity Enhancement:

a) 5 171 HH ( of which 2 330 women) trained in improved livestock husbandry practices ( appraisal: 5000, achievement 103%); b) 3 586 HH under 2 304 ha engaged in participatory fodder promotion and production demonstrations (appraisal: 3000 HH/1020 ha, achievement 120%/226%); c) 146 groups engaged in improved sheep production trials ( appraisal:50, achievement 292%); totaling 9 413 HH ( appraisal 3250 HH, achievement 290%); d) 97 business plans prepared and received financing (appraisal:20, achievement 485%).

7. The component “Income Generation activity for Women” benefited HH, specifically:

Table 2. Provided Machinery and its quantity

No.	List of provided machineries	Quantity
1	Tractor (MTZ 82.1\952\80X\1025, YTO 1004\504\902, XINGTAIXT22,4)	256
2	Front loader	14
3	Grain harvester	5
4	Excavator	10
5	Vehicle-refrigerator	1
6	Various agricultural machines (including trailers, threshing machines, ploughs, hay mowers, fodder shredders, harrows, chisels, forage harvesters, mowers of various brands, etc.) were imported.	2886

Source: PMU, August 2021

8. Table 3 below provides information on the number of households that have used machinery services and PUUs respected income from the beginning of the project across each targeted district.

Table 3. Monitoring of Machinery rental services

No.	District	Established PUU	No. of machinery provided	HH received services from the beginning of the project	Total Income from the beginning of the project/TJS	Total Income from the beginning of the project/US\$*
1	Vose	40	694	7134	1.384.896,00	129.369,07
2	Dangara	60	682	11038	1.896.890,85	177.048,78
3	Kulob	20	327	2536	627.141,00	57.694,04
4	Hamadoni	32	500	9103	1.404.755,30	130.477,15
5	Farkhor	45	942	16847	1.941.207,27	180.307,69
Total		197	3.145	46.658	7.254.890	674.897

Source: PMU, August 2021

/\* the US\$ rate was used for years of income for Dec 2018-2020

## II. FINANCIAL ANALYSIS

9. **Objectives.** The objectives of the financial analysis are:

- (a) To assess the financial viability of the improved technologies and systems promoted by the Project and the increase in incomes from indicative investments; and
- (b) To set a basis for the economic analysis.

### A. Approach, Assumptions and Data

10. This Annex presents the ex-post economic and financial analysis (EFA) at the date of programme completion. This work is based on illustrative models representing the main activities supported during the implementation of the LPDP Phase II. The key indicators used to carry out the analysis are net present values (NPVs), the internal rates of return (IRR) and the Benefit to Cost Ratio (BCR) calculated over the project duration (6 years) and its capitalization phase (20 years).

11. The primary objective of the analysis is to validate the technical and financial viability of programme activities for targeted beneficiaries, and hence to examine the impact of the proposed interventions on family labour, cash flow and household incomes as to assess the overall economic viability of the project.

12. Data used in these models is drawn from PMU sources and answers from beneficiary's questionnaire, the M&E system at project level and national statistical sources on Tajikistan. 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 from PMU officials. Conservative assumptions were made for both inputs and outputs to avoid overestimation of benefits. A cash-flow analysis is finally carried out to present the "with" and "without" programme analysis.

13. **Numeraire and prices.** The numeraire adopted in the analysis is the domestic price level expressed in domestic currency. The financial prices for programme inputs and products are from 2016-2021 derived from market and government statistical sources, adjusted where necessary to represent farm gate prices.

14. **Exchange rate.** The exchange rate used in the analysis is fixed at 1 US\$: TJS 9,48 computed as an average of the exchange rate prevailing during project implementation period.

Table 4. Average exchange rate US\$/TJS per Year

2016	2017	2018	2019	2020	2021	Average
7,86	8,59	9,17	9,54	10,43	11,29	9,48

Source: UN Exchange rate

15. **Labour.** It has been assumed that labour is often provided by households and is valued at TJS 40. Hired labour is priced at TJS 45 day, which is the prevailing market rate in the target area.

16. **Opportunity cost of capital.** A financial discount rate of 17 per cent has been used in this analysis to assess the financial viability and robustness of the investments. It has been calculated based on

market prevailing interest rate on short/long loans. A social discount rate of 14 per cent (economic) has been calculated based on average weighted interest rate on short/long treasury bonds.

Table 5. Main Assumptions and Shadow Prices

	MAIN ASSUMPTIONS & SHADOW PRICES <sup>1</sup>						
FINANCIAL	Output		Price (in LC)/kg		Input Prices		Price (in LC)/kg
	Meat	65,00	Hay	1,40	Alfalfa seeds		35,00
	Milk (lt)	5,00	Alfalfa	1,80	Beehive		1.000,00
	Honey	60,00	Oil cake	5,00	Fertilizers		5,00
	Eggs	1,00	Grain	4,50	Incubator		8.000,00
	Chicken	50,00	Rosehip	33,00	Rural wage		45,00
	Goat	800,00					
	Sheep	480,00					
	ECONOMIC	Official Exchange rate (OER)			9,48	Discount rate (opportunity cost of capital)	
Shadow Exchange rate (SER)			9,99	Social Discount rate		14%	
Standard Conversion Factor			1,05	Output conversion factor		1,03	
Labour Conversion factor			0,83	Input Conversion factor		1,18	

<sup>1</sup> All prices expressed in Local Currency (TJS).

### Programme target group and beneficiaries

17. The LPDP Phase II has benefitted 51 391 households (1 559 HH from WIGG; 12 999 HH from CIG derived from sheep breeding and crop production; 46 658 HH from provision of agricultural machineries; 37 105 HH from vet. clinics services and 12 675 HH benefitted through technical assistance/trainings (4 183 women of the total number)). The beneficiaries who received two or more benefits (e.g. training, machinery or veterinary services) are included only once in total final number of households outreached in order to avoid double counting.

Overall, the programme benefitted women, youth and men directly involved in the livestock and marketing activities. In addition, the targeted beneficiaries were exposed to 1 ha of demonstrations in 96 PUU of fodder promotion and production, covering total area of 266 hectares. Around 12 675 households benefitted from the technical training provided under the Project. The 60 (initially planned 60) veterinary service centers in 269 villages was supported by the Project and benefitted some 37 105 households in their immediate vicinity and in addition cater to the service needs of adjoining villages. Consequently, the livestock households reporting reduction in animal mortality rates was 12.62% according to the impact assessment survey. About 95,037 ha of pasture (average 482 ha per village) had improved. The income generating activities benefitted some 1 559 female-headed households.

18. In addition to production/productivity benefits, manifested in terms of increased assets, incomes and food security and nutrition among the Project's target group, the project generated significant institutional, good governance, environmental; employment generation and wider market based economic benefits. Table 6 present permanent employments established within LPDP Phase II, estimated at 2 243 HH mostly through PUUs and WIGGs.

Table 6. Permanent employments established within LPDP Phase II

Activities	No of jobs created
197 Pasture Users Union	679
1 Association of Pasture Users of Dangara District	2
Pasture Meliorative Trust	3
WIGGs - Development of beekeeping	295
WIGGs - Milk production and marketing value chains	87
WIGGs - Cultivated and processing rosehip	120
WIGG Turkey breeding and Poultry\ user incubators	1057
<b>Total</b>	<b>2243</b>

a/ 197 head of PUU, 197 accountant, 285 machinery operators

19. Table 7 reflects phasing of activities across years covered by the project and its adoption rate

Table 7: Phasing of activities, beneficiaries and adoption rate under CIG and WIGG Activities

BENEFICIARIES, ADOPTION RATES AND PHASING							Adoption rates
	PY1	PY2	PY3	PY4	PY5	PY6	80%
<b>Fodder production</b>		0	1250	3125	108		4483
<i>Adjusted (adoption rate)</i>		0	1000	2500	86		3586
<b>CLPDP</b>		18750	18053	9239	0		46041
<i>Adjusted (adoption rate)</i>		15000	14442	7391			36833
<b>Livestock Group/sheep breeding</b>			2500	3750	4125	1391	11766
<i>Adjusted (adoption rate)</i>			2000	3000	3300	1113	9413
<b>Beekeeping</b>				250	119		369
<i>Adjusted (adoption rate)</i>				200	95		295
<b>Poultry</b>			625	696			1321
<i>Adjusted (adoption rate)</i>			500	557			1057
<b>Milk Processing</b>			109				109
<i>Adjusted (adoption rate)</i>			87				87
<b>Rosehip</b>			63	88			150
<i>Adjusted (adoption rate)</i>			50	70			120
<b>Nr of Targeted HH</b>							<b>64.239</b>
<b>Adopting HH</b>							<b>51.391</b>

20. Table 8 presents total project costs occurred during project implementation phase, its outcomes and indicators and other information about the project

Table 8. Project Costs and Indicators for Log frame

PROJECT COSTS AND INDICATORS FOR LOGFRAME						
<b>TOTAL PROJECT COSTS</b> (in million US\$)			<b>27.042</b>			
<b>Beneficiaries</b>	<b>426.545</b>	people	8,3	Households	51.391	
<b>Cost per beneficiary</b>	<b>63</b>	US\$ x person		<b>526</b>	US\$ x HH	<b>Adoption rates 80%</b>
Components and Cost (US\$ million)			Outcomes and Indicators			
1. Institutional Development	1.595	6%	In total 95 037 ha of the improved pasture ago eco-system, of which 77 815 ha through applying pasture rotational plans, 9 950 ha through fodder production, 5 866 ha watering points and dipper for livestock, 1 509 ha applying fertilizers in pastures and 527 ha of demo plots		Access to agricultural machinery to 5 districts which led to increase in improved fodder production, improved pastureland, increased income and life quality for smallholder farmers and increased livestock quantity and its quality	
2. Productivity Enhancement	1.880	7%				
3. Pasture Development	22.540	83%	Average HH increase income from livestock is TJS 3913 and 14 % increase in HH assets income.		Access to machinery services led to increased fodder crop production, reduced pressure to pastureland	
					Setting up of 197 PUUs and 2 243 permanently jobs established	
4. Project Management	1.025	4%	Established 319 CIGs equivalent of 14 558 HHs (of which 173 CIGs through fodder production activities and 146 CIGs sheep breeding activities)		Provided support to 1 559 female households for income generating activities (261 WIGG groups)	
					194 099 livestock (head) received veterinary services in 269 villages with generating income of around US\$ 23 000.	

## B. Production and Marketing Models

21. Different models have been elaborate to determine the impact of the project for the communities involved. Particular focus has been given to livestock and productive activities as well as marketing of produce and processed products. In general, groups benefitting from such activities reported increases in production, self-consumption and sales. Simultaneously, this increase in production and the development of related business activities triggered second-tier multipliers in the economy. In the following sections, details on the models included in the EFA excel working file are provided.

22. Five production models were prepared to serve as building blocks for the analysis: (i) Superficial Improvement; (ii) Radical Improvement (iii) Controlled Grazing; (iv) Alfalfa; and (v) Annual Grass.

23. Table 9 shows the Production Models Summary results and the comparison of income in the without and with project (full development at Year 6) scenarios for the above activities. Incremental increases range between US\$ 28/Ha for the Controlled Grazing model and US\$ 231/Ha for the Alfalfa (double harvesting) model. Benefit/cost ratios were also calculated for each model, which demonstrate the attractiveness of the new technologies.

### **Plan Community Livestock and Pasture Development Plan**

24. The Project supported pasture and livestock improvement interventions including access to pastures, rehabilitation of pasture schemes, water supply, livestock migration, etc. which benefitted at large and formalized in a Pasture Management and Livestock Development Plan by the participating community. The preparation of such a plan followed a set of important criteria, namely technical, social, financial and economic detailed in the Project Implementation Manual. The analysis attempts to illustrate such a plan for a typical project village. The model has been developed taking into account the practical improvements that could be made to the existing pasture and livestock practices. A typical village represents the villages of the project districts. The numbers of households and livestock, agricultural area, outputs and other data of the typical village have been identified by averaging the villages' data in the project districts and using other representative information.

25. It has been identified, that the typical village has about 1301 Ha of pastures, including 742 Ha of winter pasture, 350 Ha of spring and autumn pasture and only 209 Ha of summer pasture. It cultivates about 27 Ha of forage crops and it harvests hay and straw from about 12 Ha of haymaking fields and about 40 Ha of grain fields on average. In addition, it purchases about 15 tones of cottonseed oilcake from the local ginning factories to feed its livestock.

26. According to PMU in 2017 for 5-targeted districts (considered our WoP analysis) reflects average number of 543 heads of cattle and about 934 heads of sheep and goats as per typical village. In period of 2017-2021 (considered our WP scenario) number of cattle, sheep and goats increased for 19%. The with project scenario accounts for 566 head of cattle and 1914 heads of sheep and goats that belongs to 2 168 persons (261 HH) in typical village.

27. A demonstrative model of feed/forage balance of the typical village was prepared to serve as a base for the analysis. This includes productivity estimates for pasture and forage production areas that were put in the context of the feed/forage demand in the villages. Based on the above assessment, a list of likely project activities has been developed to reflect the feed/forage balance of the typical village. This list together with the crop's budgets, pasture improvement activities, machinery requirements, veterinary services and improved feed/forage balance forms a Plan Community Livestock and Pasture Development Plan (hereafter CLPDP). The Plan's main objective was to define options for the increased quantity and quality of the overall feed/forage production, while reducing the pressure on overgrazed degraded areas and regenerating their productive capacity.

28. The project improved on average 482 ha of pastures per village by applying better technologies (in total 95 037 ha for 197 villages), particularly through the pasture improvements and controlled grazing activities. It has been estimated that on average 204,5 ha of summer pasture has been rented in order to balance the feed/forage demand (half of the total summer pasture area). It has been estimated area expansion under forage crops increased for 27 per cent (by 31 ha to 40 ha of land area) and haymaking fields for 20 per cent (by 10 to 12 ha).

29. It has been estimated that as a result of the CLPDP implementation, production of milk increased by 30% (end target: 4 l/day vs impact assessment results 5,2 l/day). The number of targeted households reporting increased income from livestock has been estimated at 76 percent and the average in household income from livestock for 80% of population in the project area made TJS 3 913 according to the impact assessment survey.

30. The increase of cattle average weight in the project area slightly increased by 1.85%, which amounted to 264.8 kg (260 kg in 2019). The weight of sheep increased significantly by almost half of the previous weight and amounted to 45.7 kg (30 kg in 2019). The weight of goat has changed slightly, but has changed in a positive direction, increasing by 12.8% compared to the previous average weight in 2019. Thus, an increase in the average livestock weight, especially sheep, has been recorded in the project area according to the impact assessment results.

31. Summary. The financial analysis of the CLPDP shows: (i) the increase in incremental income; and (ii) a high benefit/cost ratio and IRR demonstrating the attractiveness of the investments. Sensitivity analysis was undertaken to assess the impact of changes in: (i) output prices; (ii) expected yields; (iii) operating costs; and (iv) investment costs on the financial returns. Table 9 presents a summary of the CLPDP model while the details could be found in EFA excel working file.

Table 9: Summary of CLPDP Model

Items	Unit	Without Project	With Project Full Development	Incremental	
				Value	%
<b>Number of households</b>	no	120	120	0	0%
<b>Population</b>	no	720	720	0	0%
<b><u>Land structure and livestock number</u></b>					
<i>Pastures</i>					
Summer pasture, total	ha	5	210	205	4090%
Own	ha	5	5	0	0%
Rented	ha	0	205	205	
Winter pasture	ha	750	742	-8,3	-1%
Spring/Autumn pasture	ha	350	350	0	0%
<i>Subtotal Pasture</i>		<b>1.105</b>	<b>1.301</b>	<b>196,1375</b>	18%
<i>Fodder crops</i>					
Alfalfa	ha	21,45	26,81	5,3625	25%
Annual grass	ha	10	13,00	3	30%
<i>Subtotal Fodder crops</i>		31,45	39,81	8,3625	27%
<i>Haymaking fields</i>	ha	10	12	2	20%
<i>Livestock number (in Sheep Units)</i>	SU	<b>3.137</b>	<b>3.491</b>	354	11%
<b>- Production</b>					
Meat	kg	24.576	35.856	11.279	46%
Milk	kg	176.825	306.547	129.722	73%
<b>- Revenues</b>					
Meat	US\$	168.477	245.799	77.322	46%
Milk	US\$	93.245	161.651	68.406	73%
<b>Total Revenues</b>	US\$	261.722	407.450	145.727	56%
<b>Average Household's Benefits</b>					
Milk consumption	kg/capita	81,7	141,6	59,9	73%
Meat consumption	lt/capita	33,1	48,0	14,9	45%
Annual net income from livestock	US\$/hh	926	1.353	428	46%
<b>Improvement Activities</b>					
<i>Pasture Improvement:</i>					
Superficial improvement (SI)	ha		80,4		
Radical improvement (RI)	ha		41,5		
Controlled grazing (CG)	ha		918,0		
<i>Other operations</i>					
Machinery package a/	set	0	1		
Livestock migration c/	SU	0	1.746		
Vet services, vaccination d/	SU	1.651	3.491		
Pasture renting	ha	0	205		
Payment to shepherd b/	SU	826	1.746		
<b>- Cost of 3-year Improvement Plan</b>					
	US\$		<b>115.696</b>		
	hh		44		
<b>Total Net Income</b>	US\$	241.435	353.069		
<b>Incremental Net Income</b>	US\$		111.635		
<b>Incremental annual net benefits per US\$1 of investment</b>	US\$		<b>0,96</b>		
<b>NPV (@17%)</b>	US\$		294.450		
<b>Switching Values:</b>					
- Incremental Revenues	%		81%		
- Incremental Production Costs	%		438%		

a/ a machinery package per one villages (indicative investment, other investments may include construction of watering points, shelters, spot road improvement, etc. as demanded by communities)

b/ coverage: WOP - for only 25% of livestock; WP - for 50% of grazing livestock (mostly for sheep and goats)

c/ livestock moving to summer pastures (payment to shepherd)

d/ approximately 5 TJS per one SU. Coverage: WOP - 50% and WP - 100% of livestock

32. Table 10 below summarizes the financial incremental returns from the proposed models.

33. The highest NPV under WIGG was noticed at the rosehip activities (US\$ 13 865) while the lowest for small ruminants (US\$ 3 143). The highest cost benefit ratio due to the small investment costs is for poultry activities with incubators equipment. Among pasture improvement models, alfalfa (double harvesting) demonstrates highest profitability assessed at NPV value of US\$ 834 and cost benefit ratio at 3,4. The smallest profitability occurs in models of superficial, controlled grazing and radical improvement of degraded pastures.



Table 10. Financial Analysis

FINANCIAL ANALYSIS	PRODUCTION									
	Pasture Improvement incremental income (1 ha) (TJS)					CLPDP incremental benefits (TJS)	WIGG Farm model's incremental benefits (TJS)			
	Superficial Improvement	Radical Improvement	Alfalfa	Controlled Grazing	Annual Grass	CLPDP/HH	Beekeeping	Small Ruminants	Poultry-incubators	Rosehip
PY1	-1.632	-2.436	-332	270	1.008	-61	17.058	3.504	-5.941	-12.655
PY2	700	770	2.186	270	1.008	179	12.046	727	27.338	-3.155
PY3	700	770	2.186	270	1.008	241	11.496	727	27.338	14.376
PY4	700	770	2.186	270	1.008	376	11.246	727	25.938	20.125
PY5	-580	-366	-332	270	1.008	224	10.996	727	25.588	19.995
PY6	700	770	2.186	270	1.008	428	10.746	727	27.338	48.835
PY7	700	770	2.186	270	1.008	427	10.496	727	27.338	48.835
PY8	700	770	2.186	270	1.008	451	10.246	727	25.938	48.835
PY9	700	770	-572	270	1.008	451	9.996	727	26.138	48.835
PY10	520	770	2.186	270	1.008	236	9.746	727	26.938	46.235
NPV (TJS)	1.521	797	7.911	1.521	4.701	1.130	56.639	29.801	122.699	131.465
NPV (US\$)	160,4	84,1	834,3	160,4	495,8	119,2	5.973,4	3.143	12.941	13.865
B/C Ratio	2,7	2,0	3,4	8,2	2,4	5,4	1,8	2,4	6,4	-
IRR	30%	22%	-	-	-	-	-	-	-	-

### Milk Production Parameters

According to Impact assessment survey the average milk production per day (liters) was 5,2 lt/day. The production increased for 1,2 liters compared to the end target (4 l) equivalent to for 30 percent increase or circa 60 percent increase when compared to baseline (3,2l). Nevertheless, where the average milk production is 5.2 liters per day, the 30% of participants stated that out of 5.2 liters they sell 1-2 liters and the rest is used for their own consumption. Thus, on average the 20% - 40% of milk they sell, the remaining 80% -60% are used for their own consumption according to the impact assessment survey. See below table.

Baseline (l)	3,2
End target (l)	4
Achieved daily milk production (l)	5,2
Increase (l) against end target	1,2
% increase	30%

### III. Economic. Analysis

Table 13. Results comparison (2016 vs. 2021)

	Ex-Ante EFA	Ex-Post EFA
<b>EIRR (%)</b>	20,0%	24%
<b>Discount Rate</b>	12%	14%
<b>NPV (million)</b>	8,6	1,5
<b>Project Duration</b>	<b>20 years</b>	<b>20 years</b>

34. NPV =US\$ 1,5 million (discount rate with 14%; ERR =24% (during project design ERR estimated at 20% and NPV at US\$ 8.6 million with discount rate 12%).

35. The period of analysis is 20 years to account for the phasing and gestation period of the proposed interventions. The analysis attempts to identify quantifiable benefits that related directly to the activities undertaken following implementation of the components, or that can be attributed to the project's implementation.



36. Price estimates for tradable commodities have been based on the World Bank's Commodity Market Review (September 2021). All local costs were converted into their approximate economic values using a Standard Conversion Factor (SCF) of 1,05. The labour conversion factor was estimated at 0,83; imported conversion factor at 1,18 and exported conversion factor at 1,03. All values are given in constant 2021 prices.

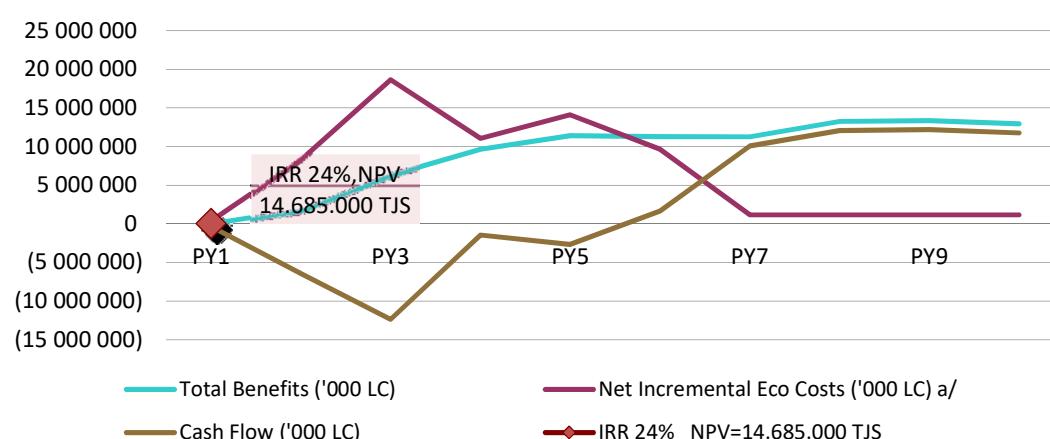
37. The incremental quantifiable benefit stream comprises of two main elements: (i) Plan Community Livestock and Pasture Development Plans (CLPDP); and (ii) Women Income Generating Activities (WIGG).

38. The illustrative models described above have been used for the calculation of the overall benefit stream, on the basis of economic prices. The summary of economic benefits of the demonstrated CLDP and WIGG models is presented in Tables 14, while the details could be found in the previous sections.

Table 14: Net Incremental Benefits of LPDP (Economic)

ECONOMIC ANALYSIS		NET INCREMENTAL BENEFITS							Net Incremental Eco Costs ('000 LC) a/	Cash Flow ('000 LC)
		Fodder Production Model a/	CLPDP/HH	Beekeeping	Small Ruminants	Poultry	Rosehip	Total Benefits ('000 LC)		
	PY1	0	0	0	0	0	0	0	358.169	-358.169
	PY2	1.199.407	-8.659	132.608	10.216	543.444	-33.009	1.844.007	8.289.388	-6.445.381
	PY3	4.269.001	-5.888	360.999	21.184	1.731.756	-57.898	6.319.154	18.654.470	-12.335.315
	PY4	6.574.529	20.909	537.657	18.056	2.472.621	24.731	9.648.504	11.082.522	-1.434.019
	PY5	7.597.727	40.891	839.174	21.712	2.804.597	120.172	11.424.274	14.091.085	-2.666.811
	PY6	6.962.485	70.189	1.147.873	19.535	2.938.665	181.093	11.319.839	9.644.035	1.675.805
	PY7	6.327.243	84.129	1.509.926	19.535	3.003.260	308.981	11.253.074	1.156.728	10.096.346
	PY8	7.809.474	92.014	1.846.671	19.535	3.016.420	455.091	13.239.206	1.156.728	12.082.478
	PY9	7.597.727	85.587	2.190.876	19.535	2.980.949	486.194	13.360.868	1.156.728	12.204.140
	P10..PY20	6.826.495	82.914	2.522.293	19.535	2.959.106	531.596	12.941.939	1.156.728	11.785.211
		NPV@ 14% ('000 TJS)		14.685		a/ includes 5 production models				
		NPV@ 14% ('000 US\$)		1.470		b/ Eco costs started in 2016				
		EIRR		24%						

Graph 1. Cash flow of incremental benefits, costs and net cash flow



39. No financing flows have been undertaken in the calculations as they represent transfer payments (grants, contributions and taxes).

40. Project benefit. Initially, the project planned to reach about 38 000 households from 180 targeted PUU (assuming around 211 households per village on average). The project outreached 51 391 households from 197 targeted PUU (assuming around 261 households per village on average).

41. It has been estimated 95 037 ha of pastures improved throughout of the project lifecycle (of which 70 542 ha with pasture use agreements and remaining 24 495 ha with pasture use certificated obtained). In addition, approximately 1 559 women benefitted from the income generating packages. Implementation of a Plan Community Livestock and Pasture Development Plan (hereafter CLPDP) and Women Income Generating Activities resulted in incremental production, consumption and sales of meat and milk, which in turn improved nutrition status of rural population in the project districts and increased their income.

42. Summary. Given the above benefit and cost streams, the base case internal rate of return (IRR) is estimated at 24%. The base case net present value of the project's net benefit stream, discounted at 14%, is US\$ 1,5 million. The summary of economic benefit and costs analysis and the details of the calculations of economic benefit and costs streams for both elements (CLPDP and WIGG) are presented in Table 14.

43. Sensitivity Analysis. Economic returns were tested against changes in benefits and costs and for various lags in the realisation of benefits. In relative terms, the IRR is equally sensitive to changes in costs and in benefits. In absolute terms, these changes do not have a significant impact on the IRR, and the economic viability is not threatened by either a 20% decline in benefits or by a 20% increase in costs. A fall in total project benefits by 50% and an increase in total project costs by the same proportion would reduce the base IRR to about 5% for benefit and 11% for the cost. A one-year delay in project benefits reduced the IRR to 18%. With a two-year delay in project benefits, the IRR falls to approximately 14%. The results are presented in the following table:

Table 15: Sensitivity Analysis

SENSITIVITY ANALYSIS (SA)						
		Δ%	Link with the risk matrix		IRR	NPV (LC)
Base scenario					24%	14.685.177
Project benefits		-10%	Combination of risks affecting output prices, yields and adoption rates		20%	9.146.129
Project benefits		-20%			16%	3.607.081
Project benefits		-50%			5%	- 13.010.062
Project costs		10%	Increase of labour costs and input non labour costs (i.e. fertilizator, seeds)		21%	10.614.647
Project costs		20%			18%	6.544.117
Project costs		50%			11%	- 5.667.473
1 year lag in ben.			Risks affecting adoption rates and low implementation capacity		18%	7.294.855
2 years lag in ben.					14%	782.777

#### IV. CONCLUSIONS

53. The LPDP II programme has shown positive impact for targeted beneficiaries. Models elaborated for the ex-post EFA through information collected during virtual field visits, M&E system, national statistics office -indicated increase in income and in self-consumption therefore contributing to food security, livelihoods enhancements, gender empowerment and increased social and economic welfare.

54. As shown in models' results, LPDP II activities were pivotal in increasing productivity and diversifying economic opportunities through value addition activities and a more sustainable use of pastures area and natural resources. In addition, the programme triggered second-tier benefits through job creation and diversification of local produce, meanwhile putting into sustainable economic use resources left idle otherwise.

55. The outcomes from the LPDP II are the following: (i) increased in yields of milk and meat production; (ii) increased in quantity and quality of livestock products marketed; (iii) reduction in animal morbidity and mortality; (iv) improved policy and regulatory framework for pasture management; (v) increased in productive capacity of pastures; and (vi) increased in women's ability to market their livestock products.

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 5: Environmental social and climate impact assessment (detailed analysis)**

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This document will be publicly disclosed unless there is written dissent on its disclosure by the Borrower at the time of this document submission to IFAD or no later than the project closing date.



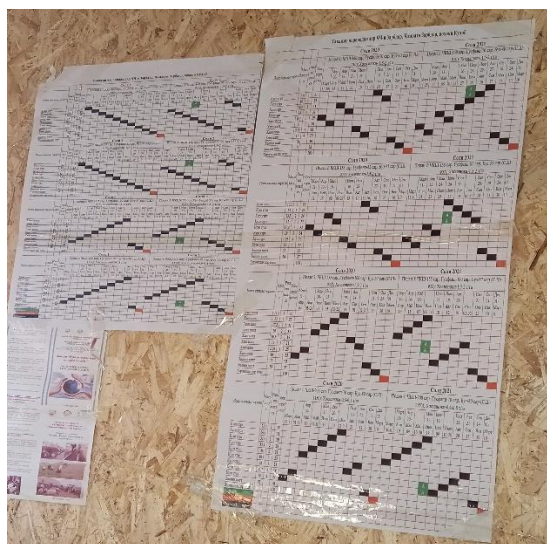
## Appendix 5: Environmental social and climate impact assessment (detailed analysis)

### Introduction

1. Climate change is a serious concern for Tajikistan as the country is highly exposed and has a relatively low adaptive capacity. The country's climate strongly exhibits aridity, high temperatures and significant interannual variability in almost all the climatic variables. Temperatures are rising across the country. The change in rainfall pattern with the increase in the February-May season and a reduction in the June-October season poses 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 feeds. Climate projections predict a worsening of the trends and events, with significant impacts on ecosystems, livelihoods and the economy. Along with a 30 percent 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.

### Improved governance and management of pastures

2. All PUUs developed and implemented CLPMPs 2017-2019 and 2020-2024 comprising a pasture management plan and an investment (sub-projects) plan using participatory methods. The pasture plans were designed taking into account the physio-geographical characteristics, the number of livestock, livestock and milk productivity, level of fodder production, and current condition of pasture use. Based on the carrying capacity analysis, the pasture use plans were prepared to improve the yield of pasture areas and adjust the number of livestock and pasture rotation system to prevent the degradation of the existing pastures. The grazing schedule (figure 1) showing grazing sequence on various areas, approximate dates and the pasturage period and the map (figure 2), including all the pasture areas, infrastructure, roads and seasonal pasture areas and were printed and available in each PUU office for implementation. The missions during the field visit noted that the PUUs are adhering to the agreed grazing schedule and that they are willing to continue good practices of rotational grazing and pasture resting, appreciating the positive impact such as improved pasture condition, reduced pasture use conflict and improved livestock productivity.



Pasture rotational plan – Kulob region



Pasture map – Kulob region

3. The impact assessment indicates that LPDP II project areas have less disputes/conflicts related to pasture, implement rotational grazing better and collecting/managing pasture fee more than control group. 75.9% of HHs from the project areas stated that they used pastures and paid all the necessary membership fees of PUU in a timely manner. On the other hand, in the control group the pasture use and its payment made only 46.6% of HHs. Regarding the conflicts resolution,



almost all HHs - 99.1% of the target group stated that they had no conflicts over the pasture use, but in the control group, this indicator was 93.9%. By the project end, 81% of HHs of the target group collect membership fees ranging from TJS 1.6 to TJS 2.5. In the control group, membership fees ranged from TJS 0.68 to a maximum of TJS 2.

4. The project contributed to the revision of Pasture law to ensure sustainability and advancement of pasture management reform in Tajikistan. The renewal and reinforcement of this legal framework strengthens and secures achievements at the field level especially by providing a legal status to PUUs. The policy dialogue process deployed with the support of the project was inclusive and involved national and local authorities, development partners, heads of districts and villagers. The main changes brought by the revised law are related to rights and duties of parties in lease arrangements, monitoring and protection of pastures, payment and utilization of renting fees and definition of rights and duties of PUUs. Besides, the project prepared and passed a five-year strategy on improving pasture management in adaptation to climate change following the revised Pasture Law.

### **Investments and adoption of new technologies building climate resilience**

5. Based on the problems and priorities identified by the PUUs, 600 sub-project investments were implemented. Under 296 sub-projects, the PUUs were provided with agricultural machinery and equipment for timely cultivation and harvesting of fodder crops: tractor 256, grain harvesting combines 5, front loaders 14, excavators 10, others 2886 agricultural machines including trailers, threshing machines, plough, hay mower, fodder shredders, harrows, chisels, forage harvesters). The PUUs received machinery and equipment generated higher income than before and re-invested additional income from the use of agricultural machinery to improve their livelihood and improve climate change adaptive capacity by repairing village roads (73km), cleaning the drains and ditches to reduce salt waters (32km), cleaning the wastes from village and schools (25.8ton/ha), drinking water transportations for villagers and livestock (288ton), free services for poor households (506 people), water supply line for livestock (0.8km), and watering points (5 units). 102 sub-projects were directly invested for pasture improvement, such as the creation of demo plots, implementation of drip irrigation and adoption of Groasis Waterboxx. 72 infrastructural sub-projects, including drinking water line and watering points for livestock (52), rehabilitation of pasture road (5), bridges to pasture (9), well drilling (1), construction of disinfectant bath for therapeutic and preventive purpose (1), construction of kashar (2) and vet clinics (2), all contributed to enhancing PUUs climate-adaptive capacity.



Before sub-project, there was one water point in Vose district (PUU Ibrat) that did not match the hygienic requirements and also caused spreading of livestock disease.



After sub-project, the villagers' livestock was provided by drinking water, the problem related to livestock daily passage of 6-8km distance for drinking water has been solved and the livestock health condition and productivity improved.

6. According to the impact assessment, the situation with access to resources before and after the project is significantly different in the most favorable direction; there is a positive dynamic in the project areas, almost in some areas twofold. In particular, the access in the project area to drinking water for livestock, cattle-tracks and other important resources increased. The growth in access to resources in the project area is higher than in the control area.
7. Also, the project provided support to 526.5ha of demonstration plots for 96 PUUs to illustrate the vegetation response to absence of livestock grazing, which revealed a diverse array of plant species that were not obvious under continuous grazing. 198 sets of fences and electronic fence materials, modern technology enhancing water efficiency called Groasis Waterboxx (20,850), cultivation of climate resilient shrubs (prostate summer sypress, saxaul/haloxylon, shogun), fodder crops (alfalfa, purple sage) and trees (pistachio, almond, cherry and rosehip).



Groasis Waterboxx is a waterless incubator that collects water from night dew or precipitation, after which it feeds the seedling for a fairly long time. The container prevents the water evaporation and protects the roots from the sun and small rodents, maintains a constant temperature of the rhizome, which allows trees to grow well. Regular monitoring by project specialists showed that using Waterboxxs in pastures, 70-80% of the trees planted are in good growing condition. Furthermore, once tree roots are intact, PUU members remove the Waterboxxs from the trees and use them to grow tomato and cucumber using Waterboxx as well, providing villagers with some fresh vegetables and additional economic benefits to farmers.

8. From the beginning of the project, 95,036.69ha (100%) of pasture land has been improved through the following:

Activities	Ha	%
a) Applying pasture rotation plans	<b>77185.19</b>	81
b) Establishment of demo plots	<b>526.5</b>	0.5
<ul style="list-style-type: none"> <li>- Natural pasture rehabilitation</li> <li>- Use of modern technology</li> <li>- Ecological pasture restoration</li> <li>- Planting trees (pistachio 34.8ha with Groasis Waterboxx, 21.6ha natural keeping, almond 18ha, cherry 4ha, rosehip 12.9ha) resistant to climate change</li> </ul>	22 124.2 289 91.3	
c) Applying fertilizers in pastures	<b>1509</b>	1.7
d) Implementation of technical sub-projects for improvement of fodder production base	<b>9950</b>	11
e) Construction of watering points and dipper for livestock	<b>5866</b>	6.2

#### Income diversification and generation

9. The project created 261 Women income generating groups (WIGGs) covering of 1559 women to enhance their adaptive capacity through income diversification. 12 rosehip cultivation and processing WIGGs (120 women) were provided with 29,000 bushes of rosehip and 12 packing

and drying equipment for processing workshops. 8 milk production and marketing value chain WIGGs (87 women) were provided with 16 black-and-white cows and 71 Swiss-style cows, 8 industrial refrigerators, 32 cans and more than 42 tons of feed. 74 beekeeping WIGGs (295 women) were provided with 2950 hives with all the necessary equipment for beekeeping. Lastly, 167 turkey breeding WIGGs (1057 women) were provided with 3888 female turkeys and 432 male turkeys as well as 175,680kg of feed and 195 incubators. Participatory processes were used allowing the WIGGs to select their activity and they were asked to provide a match of 5% to contribute to the project. All women interviewed during the field visits reported a positive outcome of the initiative and an increase in their income.

10. The impact assessment indicates that thanks to LPDP-II income diversification activities, the average income in the project area is TJS 368.54 which is assessed to be 87.5% higher than in the control group (TJS 196.58). The following incomes from 3 sources were included and summarized on average: (1) sales from raw product (income from sale of agricultural products and livestock with or without processing), (2) sales from processed products and other agricultural products (income from the sale of processed agricultural products and from business), (3) other income (salary, migration, pensions, remittances, entrepreneurship and land lease). It is important noting that the average income from category 2 – sales from processed products and other agricultural products of LPDP-II beneficiaries is TJS 368.54, almost double than that of the control group (TJS 196.58).



## **SECAP.**

Rating is premised on the fact that SECAP was prepared and is strongly aligned with, and contributes to the priorities of the Third National Communication of Tajikistan to UNFCCC, which identifies agriculture and livestock as one of the most vulnerable areas to climate change. All the key issues highlighted in SECAP notes, namely unstable pasture management, climate change, governance of tenure rights, weak policy/legal framework and governmental support, have been addressed and mitigated throughout project implementations. Although SECAP related documents such as ESMP were not produced, the SECAP recommendations were well taken and integrated into AWPB, PIM, procurement and monitoring plan.

By design, the project was given a B classification, suggesting that it does not generate any irreversible social, environmental, and climate change impacts in the short or long term. Also, the project has an ASAP component aiming to mainstream climate change adaptation into the whole investment. The project design incorporated climate change adaptation measures (see Component 1.1 and Component 3 and Adaptation to Climate Change section), the restoration of ecologically-sensitive pastureland (see Component 2.1, Component 3 and Environment and Natural Resource Management section), and the special consideration of women, youth and marginalized groups in the economic diversification and income generation activities (see Component 3.2 and Gender Equality & Women's Participation Section).

The project has progressed relatively well in addressing key climate and environmental issues defined within the SECAP review note. The assessment on pasture indicated the increased pasture productivity in all targeted area, thanks to a number of various climate resilient interventions. Also, the project reached its intended target group including women and its M&E system adequately captures gender disaggregated data and all RIMs indicators are disaggregated. The short-term remote backstopping supported the NCAEC develop materials to deliver training for the PMU project implementation staff on environmental requirements, climate change adaptation and other safeguard measures.

The project approach has been based on community-driven development to enhance adaptive capacity, reduce climate-induced risk and reduce poverty. PUUs organized and carried out the participatory planning process to develop risk-mitigating CLPMPs which comprise rangeland management (rotational grazing and resting), production of alternative green fodder, investment projects such as improvements in infrastructure to enhance mobility (which essential in order to reduce pressure on pastures close to settlements) and provision of water points for animals.

The project has reacted well to the COVID-19 crisis thanks to robust project planning and execution and eventually to the decision to remove the SOE threshold and have a "Straight Through Processing", decision taken already in 2019 as well as prioritizing activities. As a result of this exercise, some activities such as international study tours, TAU's twinning programme and international conferences were dropped. IFAD as well has opted for remote online missions for the 2020 supervision as well as 2021 completion mission and the PMU has spared no effort to cooperate with these arrangements.

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 6: Dates of supervision mission and follow-up missions**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
Loan ID 2000001439  
DSF Grant ID 2000001438

Near East, North Africa and Europe Division  
Programme Management Department

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<b>Mission</b>	<b>Dates</b>
<b>Supervision Mission 1</b>	15 October 2017 - 02 November 2017
<b>Supervision Mission 2</b>	07 October 2018 - 20 October 2018
<b>Mid-Term Review 1</b>	08 September 2019 - 29 September 2019
<b>Remote supervision mission 1</b>	22 November 2020 - 23 December 2020

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 7: Terms of Reference of the completions review mission**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
Loan ID 2000001439  
DSF Grant ID 2000001438

Near East, North Africa and Europe Division  
Programme Management Department

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## **Appendix 7: Terms of Reference of the completion review mission**

### **Terms of Reference for Consultants and other persons hired by IFAD to participate in missions under a non-staff contract**

#### **COUNTRY OF ASSIGNMENT/LOCATION:**

Remote mission

#### **MISSION NAME:**

LIVESTOCK & PASTURE DEVELOPMENT PROJECT II (LPDP II) – PCR MISSION

#### **MISSION START AND END DATES:**

23 August -3 September 2021

#### **REPORT TO:**

M. Kauttu, Country Director

#### **MISSION COMPOSITION:**

Christa Ketting, Social inclusion officer and team leader (IFAD staff).

Dajana Grandic, EFA Specialist (19 days)

Sooyeon Kim, Environmental and social inclusion specialist (IFAD staff)

Joldoshibek Dadybaev, Livestock specialist (13 days)

Nino Gogdsadze, Procurement Specialist (14 days)

Lola Mukhtorova (13 days)

1. In August and September 2021, a (remote) Project Completion Mission for the LPDP II will be conducted. The objective of the assignment will be to provide support to the Government of Tajikistan (GoT) to produce a Project Completion Report (PCR) in consultation with project stakeholders and in line with IFAD guidelines.

#### **I. BACKGROUND**

2. The LPDP II became effective on 3 February 2016. Project financing amounts to US\$ 24,194 consisting of an IFAD loan of US\$ 8,700,000, an IFAD DSR grant of US\$ 8,700,000, ASAP grant of US\$ 5,000,000 and domestic co-financing of US\$ 1,794,000. The project's development objective is to increase the nutritional status, incomes and resilience of poor households by enhancing livestock productivity in a sustainable manner. LPDP II's goals is to contribute to the reduction of poverty in Khatlon region (50% of people in Khatlon are estimated as being below the poverty line. LPDP II is implemented in the districts of Vose, Kulob, Dangara. The project has three inter-related components allowing it to achieve the goal and objective: (i) Institutional Development; (ii) Productivity enhancement and improved animal health and (iii) Pasture Development and Diversification for Vulnerability reduction.

#### **II. MISSION TASKS**

3. The mission shall produce the project completion report for the LPDP II drawing on all preceding preparatory surveys commissioned by the project and IFAD, discussions with project staff and discussions with stakeholders. The mission shall assess and document overall project implementation performance and the results achieved. This process calls for an informed reflection on the relevance, effectiveness, efficiency and sustainability of project interventions covering all aspects of project management, community mobilization, natural resource management, rural finance and rural marketing. The latest PCR guidelines and templates will be shared with the team prior to the mission.
4. Further to an assessment of the COVID-19 situation in June/July, a decision will be made on whether the mission will be conducted in person or semi remote modality. A (draft) mission schedule shall be developed further to the decision and will be shared with the mission members. However, mission members should work under the assumption that some days will be spend in the capital and up to 4 days could be spent in (remote) field visits. As, mentioned above, when it is not possible to conduct the mission in person due to the the COVID-19 situation the mission will be conducted in a semi-remote modality. In that case, only one mission member, Ms. Lola Mukhtorova to be exact, will be traveling to the field for verification visits. Other mission members shall provide questions to Ms. Lola Mukhtorova prior to her travells. Above and beyond the meetings

that are organized as a team, mission members will be asked to organize separate meetings with people of interest and finalize their meeting contributions independently. It should be noted in that sense, that the basic impact survey will be available around July and that broad outcome data shall follow in September 2021. The mission will start developing a report based on the draft outcome data which might need to be further fine-tuned when the detailed data becomes available in September. Deadline for final submission of the PCR is currently set on 1 November 2021 yet might be altered in due course due to the outcome survey.

5. **Ms Christa Ketting, Team Leader and Social Inclusion Officer**, will lead the team and have overall responsibility for drafting the PCR. In addition she will:
  - Work together with Ms. Sooyeon Kim and assess project achievements in relation to Component 1 (institutional development) specifically focusing on the development of community organizations.
  - Assess, provide inputs in or lead the development of the PCR sections as indicated in annex 1 "division of tasks".
  - Generate and document useful lessons as well as recommendations from implementation that will help improve IFAD's or Borrower's future programming and designs with regards to participatory pasture and livestock development and dairy VC and access to markets, as well as gender and youth targeting.
  - Identify any potential for the replication or up-scaling of best project practices.
  - Draft an Aide Memoire with inputs from all mission members.
  - Lead the drafting of project completion report in line with IFAD guidelines.
  - Undertake any other relevant task as agreed with the CD.
6. **Ms Sooyeon Kim**, will be responsible for the following tasks:
  - Assess, provide inputs in or lead the development of the PCR sections as indicated in annex 1 "division of tasks".
  - Assess the effectiveness of the pasture development activities in relation to Component 1 (institutional development) specifically focusing on the advancement of the legal framework for the and Component 3 (pasture development and diversification for vulnerable communities) specifically focusing on pasture development.
  - Assess the implications and effectiveness of the ASAP funded project elements.
  - Generate and document useful lessons as well as recommendations from implementation that will help improve IFAD's or Borrower's future programming and designs with regards to pasture and livestock development and dairy VC and access to markets .
  - Identify any potential for the replication or up-scaling of best project practices.
  - Provide inputs in the Aide Memoire and PCR as per the above as well as annex 1.
  - Undertake any other relevant task as agreed with the team leader and the CD.
7. **Ms Dajana Grandic, Economic and Financial Analyst**, will be responsible for the following tasks:
  - Assess, provide inputs in or lead the development of the PCR sections as indicated in annex 1 "division of tasks".
  - Review the LPDP II costs and benefits and the efficiency of the overall LPDP-I implementation process, including IFAD's and partners.
  - Estimate project cumulative physical achievements as compared to design estimates (quantities and %).
  - Estimate the project's Economic Rate of Return to determine the projects overall value for money, and benefits in relation to project costs.
  - Indicate whether there are any income is generated or value is added through social and environmental benefits.
  - Support the assessment of the effectiveness, sustainability and effectiveness of project implementation, or the extent to which project objectives were met, and to document the immediate results and impacts of project interventions.
  - Analyse the Project costs for the various activities and achievements.
  - Identify the benefits generated by the Project for the direct and indirect targeted populations.
  - Conduct the analysis of various data needed for the ex-post economic and financial analysis of the Project.
  - Conduct the ex-post economic and financial analysis of the Project.
  - Write an EFA annex of the Project in line with the latest guidelines.
  - Provide inputs in the Aide Memoire and PCR as per the above as well as annex 1.
  - Review the final PCR from an EFA perspective.
  - Undertake any other relevant task as agreed with the team leader and the CD.



8. **Mr Joldoshbek Dadybaev**, will be responsible for the following tasks:
- In specific, assess the effectiveness of component 2: "productivity enhancement and improved animal health.
  - Assess, provide inputs in or lead the development of the PCR sections as indicated in annex 1 "division of tasks".
  - Provide overall inputs and guidance on the project implementation approach, effectiveness and impact pertaining to all the animal health –related aspects of LPDP II.
  - Generate and document useful lessons as well as recommendations from implementation that will help improve IFAD's or Borrower's future programming and designs with regards to productivity enhancement and improved animal health.
  - Assess the prospects of sustainability of project benefits beyond project completion.
  - Identify any potential for the replication or up-scaling of best project practices.
  - Provide inputs in the Aide Memoire and PCR as per the above.
  - Undertake any other relevant task as agreed with the team leader and the CD.
9. **Ms Nino Gogsadze**, will be responsible for the following tasks:
- Conduct an overall assessment of the performance of procurement management by the Borrower/Recipient and lead project implementing agency throughout the life of the project.
  - Execute a desk review of all the Supervision Reports and implementation support reports throughout the project cycle
  - Assess strengths and weaknesses of the project's procurement set-up, remedial actions that successful enabled challenges to be overcome.
  - Provide key lessons learned, and recommendations for future procurement designs in the same country and with the same lead project implementing agency.
  - Provide inputs in the Aide Memoire and PCR as per the above.
  - Undertake any other relevant task as agreed with the team leader and the CD.
10. **Ms Lola Mukhtorova**, will be responsible for the following tasks:
- Work together with Ms. Sooyeon Kim and assess project achievements in component 3 (pasture development and diversification for vulnerability reduction) specifically focusing on income diversification.
  - If needed, to travel to the field for 4 days to conduct interviews with beneficiaries and field based stakeholders. Mission members will provide questions and guidelines to Ms. Lola for her interactions with beneficiaries prior to traveling.
  - Provide overall inputs and guidance on the project implementation approach, effectiveness and impact pertaining to the income generating activity related aspects of LPDP II.
  - Assess the prospects of sustainability of project benefits beyond project completion.
  - Generate and document useful lessons as well as recommendations from implementation that will help improve IFAD's or Borrower's future programming and designs with regards to productivity enhancement and improved animal health.
  - Identify any potential for the replication or up-scaling of best project practices
  - Undertake any other relevant task as agreed with the team leader and the CD.

### **III. DOCUMENTATION**

11. The following documentation will be made available to consultants prior to commencing the assignment: Supervision mission and follow up mission reports, reports on disbursement and status of funds, PCR sample report, and other relevant reports and materials.

#### **IMPORTANT NOTE:**

IFAD will accept only reports that have been properly formatted by using the template, which will be provided separately. The team leader is responsible for preparing the main report and annexes in the required format, and ensuring that the working papers submitted by the individual team members are consolidated in one single document and in the correct format. He will compile the full report, including his own contributions and those of all the mission members into one consistent final and complete Report and submit it to IFAD on or before the agreed deadline.

## Annex 1: Division of tasks.<sup>1</sup>

	Lead	Contributions
– Relevance	CK	All
– Effectiveness	CK	All
– Efficiency	CK	All
– Sustainability	CK	All
<b>Rural poverty impact</b>		
– Households' incomes and assets	DG	CK
– Human and social capital	CK	DG LM ZK
– Food security	CK	
– Agricultural productivity	CK	JD, LM, DG
– Institutions and policies	CK	JD, LM, ZK
– <b>Overall rural poverty impact</b>	CK	
<b>Additional evaluation criteria</b>		
– Gender equality and women's empowerment	CK	ZK, LM
– Innovation	CK	DG, SK, JD
– Scaling up	CK	DG, SK, JD, ZK
– Environment and natural resource management	SK	JD
– Adaptation to climate change	SK	JD
– Targeting and outreach	CK	DG
– Access to markets	LM	CK JD
<b>Partners performance + Others</b>		
– IFAD's performance	CK	
– Government performance	CK	
– Procurement	NG	
– Quality of financial management	Alaa	
– M&E and KM	KS	CK/SK/ZK
– Project internal rate of return	DG	

<sup>1</sup> In the table, ZK refers to Zainab Kenjaeva, KS refers to Karim Sissoko and AA refers to Alaa' Abdel Karim. These colleagues will contribute to the report but are not included in the TORs.

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 8: List of person met and mission's programme**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
Report No. 6067-TJ  
Loan ID 2000001439  
DSF Grant ID 2000001438

Near East, North Africa and Europe Division  
Programme Management Department

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## Appendix 8: List of person met and mission's programme

Tuesday 24 August 2021				
12:00-13:00	15:00-16:00	Tajik Academy of Agricultural Sciences	Mr. Amirshoev Faizullo Mr. Rahimov Sharofjon, Mr. Nurzoda Nazar	Vice President of the Tajik Academy of Agricultural Sciences, Head of Department of Intensive Biotechnology Main spacialist of international Department
Wednesday 25 August 2021				
11:00-12:00	14:30-15:00	Committee on Food Security	Mr. Andamov Ismoil Mr. Afgonov Abdulahad	Head of the Department Veterinary Deputy Head of the Department Veterinary
Thursday 26 August 2021				
	All day	Field visit (Lola and Zainab)	Farkhor and Kulob districts	
Friday 27 August 2021				
11:00-12:30	14:00-15:30	Tajik Agrarian University	Mr.Muhmadyorzoda Usmon Mamur Mrs.Bobokhonova Zebunisso Karaevna Mr.Boboev Sharif Kanoatshoevich	Rector Deputy rector Deputy rector
Monday 30 August 2021				
10:30-12:00	14:00-15:00	Ministry of Agriculture Pasture Meliorative Trust	Mr. Karimzoda Sadi Gaffor	First Deputy Minister Deputy Minister; Deputy Head of Pasture Meliorative Trust
12:30-14:00	15:30-17:00	Committee on Environmental Protection under the Government of the Republic of Tajikistan	Mr. Bahodur Sheralizoda Mr. Turakul Murodov	Chairman Head of Project Implementation Group
Tuesday 31 August 2021				
11:00-12:00	14:00:15:00	Ministry of Economic Development and Trade	Mr. Solehzoda Ashurboy Mr. Ahadzoda Bahodur	First Deputy Minister Head of Department of Real Sectors of Economy

Wednesday 1 September 2021				
11:00-12:00	14:00:15:00	<b>State Committee on Investment and State Property Management</b>	Mr. Muhammadi Amaki	Head of Department of external aid coordination and monitoring of projects
12:30-14:00	15:30-17:00	<b>State Committee on Land Management and Geodesy</b>	Mr. Karimzoda Azizmamad Mr. Gulomhaidarov Akmal Mr. Mirzo Nazar	First Deput of Committee Head of international Department Head of cadastre Department
Thursday 2 September 2021				
11:00-12:00	14:00:15:00	<b>Committee on Women and Family Affairs under the Government of the Republic of Tajikistan</b>	Ms. Akobirova Javohir Ziyoratshoevna,	Head of the Department of Gender Development and International Relations
Friday 3 September 2021				
11:00-12:00	14:00:15:00	<b>Ministry of Finance</b>	Mr. Qahhorzoda Faiziddin Sattor Mr. Majidi Ysuf Mr. Jamolov Abdugaffor	Minister; Deputy Minister; Head of Main Department of public debt and public investments

## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Appendix 9: Final wrap-up/stakeholder workshop findings**

Mission Dates: 23 August - 03 September 2021  
Document Date: 31/03/2022  
Project No. 2000000977  
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## **Appendix 9: Final wrap-up/stakeholder workshop findings**

### **Report of stakeholder engagement meeting**

#### *Introduction*

On Wednesday 8 December from 12:30-15:30, the project completion mission for the LPDP-II project organized a stakeholder engagement meeting. The objective of this meeting was to (i) collect feedback on the implementation period of LPDP-II, (ii) collect lessons learned for future projects in the countries and (iii) receive recommendations for future projects. The stakeholder engagement meeting was organized by the SEPMU. Representatives from the line ministries, partners, service providers as well as beneficiaries were present during the meeting. A full attendance list can be found in annex 1. Given the ongoing COVID-19 situation in the country, the stakeholder engagement workshop took place via Zoom. Interventions took place both in English as well as Russian. An interpreter was present in during the meeting and provided support when necessary.

#### *Meeting summary*

The meeting kicked off with a presentation from the PCR team provided by Christa Ketting. During the presentation, she provided the main highlights and observations from the mission. Overall, the mission had a very good impression and report of LPDP-II. The project was implemented in a timely matter, achieving very good output level results as well outcome level results. According to the mission, the PUUs seem well anchored in communities and the institutional development activities, allow for the long-term sustainability of the approach. The mission thanked the SEPMU for all the support extended slides of this presentation can be found in annex 2.

Mr Khojzoda, director of the PMU continued with a presentation on LPDP-II on behalf of the PMU. He underlined that throughout implementation, the project has been able to effectively cooperate with IFAD which resulted in surpassing the many of the initial targets as set in the design. He started his presentation with the objectives of the project. Then he summarized the objectives, interventions and the results per component. In addition, he also presented the financials of the project. Namely financial allocation and subsequently the realization per component. The PMU presentation can be found in annex 3.

Mr Tabarov from the Ministry on Finance wanted to congratulate the PMU on the work achieved. He also thanked IFAD for the financial support provided to LPDP-II. He looked forward to future cooperation with IFAD.

Mr Karimzoda from the ministry of Agriculture indicated that Tajikistan is on course to reduce poverty and develop the agricultural economy. LPDP-II made a substantial contribution to both especially by developing the PUU model. He issued special thanks to the PMU and all the employees of the PMU without whom LPDP-II would not have been a success.

Mr Muhamadi from the states investment committee was very pleased with the overall result of LPDP-II. He underlined that the committee was committed to continue working with IFAD and further develop the model also together with other development partners. He thanked the PMU for all their work.

Mr Shukurzoda from the Food Security Committee summarized the support that was received from the project. He thanked the PMU and IFAD for all their hard work and underlined that as challenges remain, the committee is there to further address them.

Mr Sharipov from the pasture management trust indicated to be very happy with all the support received especially in terms of technical assistance for revising the law. It indicated that the PUU model is a huge achievement for poverty alleviation in Tajikistan that will need to continue to be developed. He thanked the PMU and IFAD for their support.

Mr Bobokhonova from the Tajik Agricultural University summarized the support that was received from the project. He thanked the PMU and IFAD for all their hard work. The university would be available for any future projects.

Mr Abdulloev, Head of PUU Istiklol in Vose district, Mr Sharipov, Head of PUU Ziraki in Kulob, Mr Sadulloev Head of PUU Durandesh in Hamadoni district, Mr Mirakhmedov Head of PUU Javonon in Farkhor district and Mr Gurezov Head of Pasture User Association in Dangara district intervened separately on behalf of their respective organizations. Overall, they were very happy with the support received from the project and were satisfied with the PUU model. None had any critical comments on the project and looked forward to continuing cooperation.

Ms Faizulloeva member of WIGG Milk processing, Ms Ytimova WIGG rosehip processing, Ms Abdulhaeva WIGG poultry, Mr Rahmatulloev CIG seed production, Mr Rustamov CIG livestock husbandry and Mr Salimov CIG livestock husbandry. intervened separately on behalf of their respective organizations and provided a summary of all the support received from the project. They were very happy to be part of CIGs, WIGGs and no negative feedback on any project intervention was received.

# Annex 1: Participant list.

## List of participant in the LPDP II stakeholder meeting

##	Stakeholders	Number of person	Name of participants	Position
1.	Ministry of Finance	1	Tabarov S.	Specialist of investment Department
2.	Ministry of Agriculture	1	Karimzoda S.	First deputy of Minister
3.	State Investment Committee	1	Muhamadi A.	Head of Department of external aid coordination and monitoring projects
4.	PMU staff	4	Khojazoda A.	PMU Director
5.			Azimov F.	Chief procurement Consultant
6.			Barotova I.	M&E consultant
7.			Abdurasulov Sh.	Assistant PMU Director
8.	Project CFs' (NGO)	2	Danaev I.	Director of Al-Mar consulting
9.			Khudoidodov B.	Director of Orien
10.	Pasture Management Trust	1	Sharipov SH.	Head of department
11.	Tajik Agrarian University	1	Bobokhonova Z.	Vice rector
12.	SE AI	1	Mahmudov S.	Head of AI sector
13.	Food Security Committee	1	Shukurzoda Sh.	Chief specialist of Department of Vet Inspection
14.	Ogokhon Foundation	1	Khujamov S.	Chief specialist of agricultural sector
15.	Targeted districts administration	5	Rahimov I.	Deputy head of agricultural Department in Vose
16.			Qurbonov A.	Deputy head of agricultural Department in Kulob
17.			Orifzoda M.	First deputy chairman of Hamadoni district
18.			Rajabov H.	Specialist of agricultural Department in Farkhor
19.			Abdulloev E.	Head of agricultural Department in Dangara
20.	Head of PUU	5	Abdulloev R.	Head of PUU Istiklol in Vose district
21.			Sharipov B.	Head of PUU Ziraki in Kulob
22.			Sadulloev A.	Head of PUU Durandesh in Hamadoni district
23.			Mirakhmedov F.	Head of PUU Javonon in Farkhor district
24.			Gurezov S.	Head of Pasture User Association in Dangara district
25.	Head of WIGG and CIG	6	Faizulloeva Z.	Member of WIGG Milk processing
26.			Ytimova M.	WIGG rosehip processing
27.			Abdulhaeva F.	WIGG poultry
28.			Rahmatulloev A.	CIG seed production
29.			Rustamov F.	CIG livestock husbandry
30.			Salimov A.	CIG livestock husbandry



## **Tajikistan**

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### **Livestock and Pasture Development Project II**

### **Project Completion Report**

### **Annex: Appendix 10 Adaptation For Smallholder Agriculture Programme**

Mission Dates: 23 August - 03 September 2021  
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## Appendix 10: Adaptation for Smallholder Agriculture Programme

### 1. Introduction

1. LPDP-II is in essence a geographical expansion of LPDP, however, with integration of the urgent issue of climate change adaptation in the both phases. The LPDP is a major intervention in the country in terms of advancement of pasture management reforms and livestock sector development. Based on experience and outcomes of the on-going project, the Government of Tajikistan has decided to upscale its approach to additional areas with livestock development potential.

2. Despite the fact that the Khatlon region is among the most vulnerable areas to climate change and disaster-related risk, the growing impact of climate change has not yet been explicitly taken into account in LPDP, specifically in terms of development of the Community Livestock and Pasture Management Plans (CLPMP) and setting priorities for wise long-term investments in improving pastures. Thanks to the availability of Adaptation for Smallholder Agriculture Programme (ASAP) financing, the urgent issue of climate change adaptation has been integrated in LPDP-II. The fact that the response of the international community and climate finance to the threat of climate change in Tajikistan has so far been mostly limited to pilot initiatives is another a strong argument for LPDP-II to benefit from the ASAP.

### 2. Components

3. Under **Component 1** (Institutional development), ASAP funding co-financed the development of community organization. The funding was used to mobilize Pasture Users Unions (PUUs) and Common Interest Groups (CIGs) and conduct capacity building training.

4. Under **Component 3** (Pasture development and diversification for vulnerability reduction), ASAP funding co-financed the Community resilience pasture management plans investments and income diversification.

### 3. National Determined Contributions (NDC)

5. The Republic of Tajikistan is a participating country of the international Pilot Programme for Climate Resilience (PPCR). At the time of preparation of the INDC, the main efforts of the PPCR in the Republic of Tajikistan are focused on hydraulic power industry, development of other renewable sources of energy, agriculture and forestry, adequate response to and risk reduction against natural disasters, provision of hydrometeorological services, as well as measures to raise public awareness. The project contributed to agriculture and forestry, in particular, land use and grazing, along with raising public awareness.

6. The Project is also in line with the National Action Plan on Climate Change (NAP) and the Tajikistan Strategic Programme for Climate Resilience (SPCR), and contributes to further integrate climate change adaptation considerations in the National Development Strategy 2006 - 2015 (NDS) that already includes environmental sustainability targets, the Poverty Reduction Strategy (PRS-3) that explicitly mention climate change issues, and the Climate Change Adaptation Strategy for the period 2015-2030, which is being developed under the leadership of the Hydrometeorology State Department.

### 4. ASAP results

7. The following table presents indicators extracted from the project's logframe. It features ASAP core indicators and project-specific indicators of ASAP that have been defined at project design. Each indicator includes a short narrative describing how the indicator was measured and a justification for why the target was exceeded or not met.

	ASAP Core Indicator	Target	Result	Description
1	Poor smallholder household members supported in coping with the effects of	190,000 Men: 95,000	193,905 Men: 97,913	The estimates originated from the total number of direct and indirect beneficiaries of LPDP-II, which

	climate change (ASAP 1)	Women: 95,000	Women: 95,992	mainstreamed adaptation to climate change in all project activities.
2	Land under climate-resilient practices (ASAP 2)	95,000ha	95,036.7 ha	The improvement of pastures in the project areas amounted to 95,036.7ha, of which pasture turnover 77,185.2 ha, demonstration plots 526.5 ha, the use of mineral fertilizers 1,509 ha, infrastructures of 5,866 ha, and machinery and equipment for sowing, harvesting and storing feed 9950 ha.
3	Community groups engaged in NRM and climate risk (ASAP 6)	Number of Group: 180  Total number of people: 1,260 (Men 882, Women, 378)	Number of Group: 197  Total number of people: 1,632 (Men, 1,143, women, 489)	Each of 197 PUUs supported by LPDP-II developed a pasture management and investment plan containing climate risk adaptation measures. The plans presented the basis for sub-projects on equipment, water points, pasture connectivity road and pasture improvement.
	<b>Project-specific indicators of ASAP</b>	<b>Target</b>	<b>Result</b>	<b>Description</b>
1	# of households (50% of targeted population) have access to infrastructure (equipment, water points, shelter, storage, pasture connectivity road) that is climate resilient and environmentally sound	18,000	18,696 (103.87%)	The estimates originated from the number of direct and indirect beneficiaries that have been calculated for each of 600 sub-projects that have been carried out on agriculture machinery, water points, pasture connectivity road and pasture improvement and etc. (refer to indicator 4).
2	# of financing of sub-projects of PUUs (by priorities – first, second and set).	591	600 (101.52%)	ASAP grants funded 600 sub-projects for 197 PUUs (roughly 3 sub-projects each). Of these, sub projects for the purchase of agricultural machinery amounted 296, infrastructure 72 (water supply lines and water points for livestock 52, construction of livestock bridges 9, cattle tracks 5, veterinary clinic 2, kashar (winter shelter) 2, and well drilling 1), improving pastures 102 (demo plots, drip irrigation, water boxes), beekeeping 40, livestock breeding 90.
3	Ha of pasture is rehabilitated through ecosystem restoration approaches	7,560	7,901ha (104.51%)	Under the project was rehabilitated 7901 ha pasture ecosystem through following ecosystem restoration activities: (i) Establishment of demo plots 526.5 ha; (ii) Applying fertilizers in pastures 1509 ha; (iii) construction of a watering points and dipper for livestock 5866 ha.



## 5. Building climate resilience

8. **Enhanced assets and access to basic services.** ASAP grant had a significant impact on how communities are managing their pastures today. Pastures are managed in a better way and more pasture areas (especially summer pastures) are now more accessible. 197 PUUs set up 5-year CLMPs. PUU members met during supervision and completion missions all could explain well to the field mission team how they are implementing the pasture rotation plan using map. The plans laid out grazing periods and intensities for pasture parcels taking pasture resting and seasonal usage of pastures into account.

9. Under 296 sub-projects, the PUUs were provided with agricultural machinery and equipment for timely cultivation and harvesting of fodder crops: tractor 256, grain harvesting combines 5, front loaders 14, excavators 10, others 2886 agricultural machines including trailers, threshing machines, plough, hay mower, fodder shredders, harrows, chisels, forage harvesters). The PUUs received machinery and equipment generated higher income than before and re-invested additional income from the use of agricultural machinery to improve their livelihood and improve climate change adaptive capacity by repairing village roads (73km), cleaning the drains and ditches to reduce salt waters (32km), cleaning the wastes from village and schools (25.8ton/ha), drinking water transportations for villagers and livestock (288ton), free services for poor households (506 people), water supply line for livestock (0.8km), and watering points (5 units).

10. Besides, the ASAP grants also funded 72 infrastructural sub-projects, including drinking water line and watering points for livestock (52), rehabilitation of pasture road (5), bridges to pasture (9), well drilling (1), construction of disinfectant bath for therapeutic and preventive purpose (1), construction of kashar (2) and vet clinics (2), all contributed to enhancing PUUs climate-adaptive capacity.

11. **Social Network.** From the beginning of the project, 197 PUUs were established and registered in the appropriate structures as legal entities. PUUs received various workshop-consultations and training on the presentation of the new edition "Pasture Law", the impact of climate change on pastures, financial management and sustainability of PUU, development of entrepreneurship and business plan, development of community livestock and pasture management plan, pasture management, use of innovative device 'Groasis Waterboxx' and livestock breeding and foddering. The achievement of the LPDP-I was highlighted to members of PUUs, CIGs and Jamoat local governments through local study tours. During past years, 14 study tours conducted for 201 people from 62 PUUs. Thus, the PUUs are now in a better position to enforce climate-resilient practices for pasture management such as seasonal grazing, rotational grazing and pasture resting to ensure sustainable use of pastures as well as delivering sub-projects enhancing climate resilience and adaptive capacity.

12. **Enhanced adaptive capacity.** The project has enhanced the adaptive capacity of the PUUs by supporting sub-projects on infrastructures such as pasture roads enabling better access to pastures, water points (see paragraph on enhanced asset), providing capacity building on climate change (see paragraph on social network), and income diversification.

13. The project created 261 Women income generating groups (WIGGs) covering of 1559 women to enhance their adaptive capacity through income diversification. 12 rosehip cultivation and processing WIGGs (120 women) were provided with 29,000 bushes of rosehip and 12 packing and drying equipment for processing workshops. 8 milk production and marketing value chain WIGGs (87 women) were provided with 16 black-and-white cows and 71 Swiss-style cows, 8 industrial refrigerators, 32 cans and more than 42 tons of feed. 74 beekeeping WIGGs (295 women) were provided with 2950 hive with all the necessary equipment for beekeeping. Lastly, 167 turkey breeding WIGGs (1057 women) were provided with 3888 female turkeys and 432 male turkeys as well as 175,680kg of feed and 195 incubators. Participatory processes were used allowing the WIGGs to select their activity and they were asked to provide a match of 5% to contribute to the project. All women interviewed during the field visits reported a positive outcome of the initiative and an increase in their income.

14. Also, the project provided support to 526.5ha of demonstration plots for 96 PUUs to illustrate the vegetation response to absence of livestock grazing, which revealed a diverse array of plant species that were not obvious under continuous grazing. 198 sets of fences and electronic fence materials, modern technology enhancing water efficiency called Groasis Waterboxx (20,850), cultivation of climate resilient shrubs (prostate summer sypress, saxaul/haloxylon, shogun), fodder crops (alfalfa, purple sage) and trees (pistachio, almond, cherry and rosehip).

## 6. Performance ratings

15. Adaptation to Climate Change (CCA) and Environment and Natural Resources Management (ENRM) are both rated as satisfactory (5).

16. Adapting to climate change is a core project objective and LPDP II has mainstreamed a climate-smart approach throughout its activities, supported by the ASAP grant. The adaptation interventions designed by the project were suitable to the current and projected climate change impacts on the livestock sector in Khatlon region and provided a good basis for upscaling. The Project established 197 PUUs and supported them to develop CLPMPs for 2020-2024. PUUs were given various capacity building training on topics such as the impact of climate change on pastures and livestock, using by-products as alternative fodder, and development of community livestock and pasture management plan.

17. As much as 51,391 poor smallholder households (135% of target) reported having enhanced the resilience and adaptive capacity to climate change through sustainable pasture management, including rotational grazing, cultivation of dry-tolerant perennial fodder crops, use of water-efficient technology (Groasis Waterboxx), and various sub-projects increasing access to pasture road and water supply. The incomes of the PUU formed through the use of the received agricultural equipment and pasture use fees were invested in various kinds of activities strengthening climate resilience. Besides, income generation and diversification through 173 CIGs and 135 WIGs also contributed to enhancing adaptive capacity in the project area.

18. The project also contributed to enhancing climate adaptive capacity through policy engagement and knowledge management. The project prepared and passed a five-year strategy on improving pasture management in adaptation to climate change following the revised Pasture Law. Also, PUUs were provided with information materials, buckets, brochures on the following topics: cultivation of fodder crops, bushes and trees adapted to climate change, establishing demonstration plots on pasture improvement, using and management of agricultural equipment, technology of rosehips cultivation, feeding of dairy cattle, livestock diseases, etc.

19. Practices under component 3.1 of LPDP II promoted the rational use and management of the environment and natural resources. From the beginning of the Project, 95037ha (100% of target) has been improved through mainly pasture rotation (81%), followed by demonstration plot, use of mineral fertilizers in pastures, and implementation of technical sub-projects for improving fodder production base. In particular, planting pistachio, almond, cherry and rosehip trees worked as windbreaks for soil erosion control and fodder crop cultivation resistant to climate change as well as utilizing by-products as an alternative source of fodder reducing pressure on pasture. Pasture infrastructure development activities were conducted, which eased water scarcity issues for grazing livestock.

20. The pasture and milk productivity assessment 2017-2021, conducted as per MTR recommendation, indicated an overall increase in pasture productivity with reduced risks of soil erosion, and improved vegetation cover and plant biodiversity. This had a positive effect on the condition of pastures, which in turn contributed to stably increasing milk productivity. However, it is noteworthy that continuous support to sustainable pasture management and a long-term assessment is required given the increased number of livestock (cattle 4% and small ruminant 28%) and rainfall variability.

21. The project advanced policy and legal framework and strengthened national institutions that support pasture management. All created PUUs are provided with long term land lease agreement or/and certificate, which not only gives rights to sustainable access to pasture but also builds a solid foundation for sustainable investment in pasture improvement. The project contributed to the amendment of Pasture Law in 2019 and 2021 and increasing technical capacity of national institutions including Pasture Meliorative Trust (PMT) and the Tajik Agrarian University (TAU), ensuring the sustainability and advancement of pasture management reform in Tajikistan.

## 7. Lessons learned

22. **Sustainability of PUUs.** One of the most significant achievements is providing enabling environment for the sustainability of PUUs. All 197 PUUs have been legally registered and are officially recognized by the government and local authorities. Due to the new pasture law, as proposed and accepted under LPDP-II, their roles and responsibilities have been codified in national law. As PUUs do not own land (all land is government property), 169 agreements and 84 certificates have been

provided to them, giving them either a ten-year or a long-term right to graze on the lands. The local communities have acknowledged the benefits of the PUUs: firstly because of their role in pasture management and improvement, and secondly, because of the services they provide to communities through, e.g. the mechanized equipment provision and the construction and maintenance of communal infrastructures. The combination of the above with the fact that PUUs have proven to be financially sustainable allows us to suspect that these interventions will be sustained after project completion.

23. **Community-based pasture management.** The project employed a bottom-up planning process anchored on participatory planning at the community level to support rural women and men to develop PUUs. IFAD missions conveyed a positive report about the participatory planning methods recognizing that the approach allows beneficiaries to express their concerns, priorities and interests. The PUUs developed CLPMPs to address the degradation of pasture resources and deterioration of pasture infrastructure, climate adaptation needs in sustainable pasture management and restoration, improved winter feeding, livestock health, and production issues. The application of pasture management plans based on the rotation of grazing areas, coupled with increased production of fodder crops and sub-projects enhancing climate-adaptive capacity, has improved pasture conditions even with the increased number of livestock. ASAP funding is fully blended into the main project components and its implementation arrangements.

24. **Increasing livestock numbers vs sustainable pasture management.** Considering food security and poverty level in the target area, increases in livestock number to some extent was inevitable. During the project implementation, cattle numbers have increased by 4% and the number of small ruminants by 28% in the project area. Under component 2, CIGs were provided with 2011 Hissar rams, 413 purebred cows, and improved artificial insemination techniques, which led to an increase in livestock of 2756 heads and 376 purebred bulls which the offspring so far is 586 calves. In addition, 195 incubators were distributed, and 22267 chickens and 10881 turkey chickens were produced. Beneficiaries were provided with improved veterinary services, which improved livestock productivity. However, despite the increased number of livestock, the pasture productivity was assessed to be improved thanks to various sustainable pasture management and fodder production interventions.

25. **Income diversification.** Beneficiaries indicated that they would be satisfied with the WIGGs/CIGs interventions provided and have received additional income from it. All WIGGs and CIGs were trained on entrepreneurial skills, learned to generate additional income, gained new skills, and continued income-generating activities. This does not guarantee the financial sustainability of the organizations when for example, market circumstances change. Hence the long-term sustainability of the WIGGs and CIGs at an ultimate level depends on market circumstances.

26. **Introduction of Groasis Waterboxx.** The introduction of Groasis Waterboxx significantly saved water and other resources, including fertilizer, labour costs, energy and pipelines. The project also learned that once the trees planted using Waterboxx are grown enough after 2-3 years, Waterboxx can be removed and used in another place to plant new trees. Also, it helped to stabilize pastures, as well as to provide an additional source of income in the long term. Additional support on Waterboxx in remote areas could be considered after cost-effectiveness and life-cycle analysis of Waterboxx.

## **8. Sustainability and scaling up**

27. The successor IFAD-funded Community-based Agricultural Support Project Plus (CASP+) will scale up LPDP-II experience supporting community investments in vulnerable areas and the livestock sector. With support and co-financing from the Green Climate Fund (GCF) and synergies with other operations in integrated natural resources management, CASP+ will reinforce the earlier approach with climate change as the entry point, bringing a significantly larger scale and past and ongoing efforts with higher climate sensitivity. CASP+ development objective is to increase the resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change. The project will achieve the objective by strengthening public sector capacity for transformative climate-resilient governance of natural resources, improving community planning and access to investment resources for ecosystem management and climate adaptation, supporting through market-based approaches, the diversification of livelihoods as an element of climate resilience.