



# Tajikistan

## Livestock and Pasture Development Project Phase II (LPDP II)

### About the project

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#### Objectives

The LPDP II, which targeted poor small-scale livestock farmers, private veterinary service providers and vulnerable women-headed households, was designed to improve the living conditions and enhance the food and nutrition security of livestock farmers by boosting livestock productivity and improving the productive capacity of pastures.



#### Timing

During its 5-year operation – from 2017 to 2021 – the project established rotational pasture plans, water points, veterinary services, breeding techniques and fodder production, alongside capacity building and strengthening of social capital implemented through Pasture Users' Unions (PUUs).



#### Financing

The project was implemented by the Tajikistan Ministry of Agriculture in selected districts of the Khatlon region in south-western Tajikistan. It was mainly funded by IFAD, with contributions from the Government of Tajikistan and beneficiaries for a total cost of US\$26.16 million. The beneficiaries contributed 5 per cent of the budget mainly through fees they paid to access PUU-managed pastures.

## The project Theory of Change

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The LPDP II had three main components. The first called for establishing and strengthening farmers' organizations and other groups, the second aimed to increase livestock productivity through livestock and veterinary services and fodder supply, and the third sought to increase access to more productive and climate resilient pastures and livelihood diversification activities.

### Establish and strengthen farmers' organizations

The first component operated at village level or a higher administrative level and focused on institutional development. It established PUUs, common interest groups (CIGs) and self-help women's groups (SWGs) to support livelihood diversification efforts. It also promoted conducive policy and legal frameworks by helping provide legal status to PUUs, and the revision of the Pasture Law in 2019 that defined the rights and duties in pasture-lease arrangements, protection of pastures, and payment and utilization of renting fees. The project also supported the development of degree programmes in Sustainable Pasture Management at the Tajik Agrarian University.

### Enhance livestock productivity and improve animal health

The second component of LPDP II aimed to improve livestock productivity through training in improved animal husbandry and management practices and feed preparation. It also sought to promote best practices in animal hygiene and health issues through the development of private veterinary services and their networks.

### Increase access to more productive and climate-resilient pastures and livelihood diversification

The third component promoted rehabilitation of degraded pastures and income diversification activities. Specifically, it helped PUUs develop plans to address degradation of pasture resources and deterioration of pasture infrastructure and to identify climate change adaptation needs to deal with water shortages and vegetation cover in sustainable pasture management and restoration, and for improving winter feeding. To advance income diversification, it provided financing to encourage and nurture new economic activities beyond livestock through the CIGs and SWGs.

## Project outreach and outputs

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Determining the overall impact of the project initially requires understanding who the project reached and what outputs it generated. These are noted in the figure below.



Beneficiary household members

**426,997**

Pasture user unions (PUU)

**197**

## Project impact

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The Livestock and Pasture Development Project Phase II (LPDP II) has been subject to a rigorous impact assessment.

### Data and methods

The appraisal of the LPDP II impact was based on an ex-post quasi experimental sample design that covered 82 communities in 9 districts and 1,496 households (both beneficiaries and non-beneficiaries). Surveys to collect detailed livelihood data were undertaken from August through October 2021. Matching ensured that comparison households characterized a good counterfactual by representing the situation of treated households if they had not received the LPDP II interventions. The attributable impacts presented below are Average Treatment Effects on the Treated based on Inverse Probability Weighted Regression Adjustment methodology.

## Key impact estimates



### Income

LPDP II had a positive impact, increasing livestock income by 110 per cent. Although it did not have a significant impact on increasing total income, livestock income makes up the largest share of beneficiary incomes and was the income source targeted by the project.



### Production

LPDP II also had a positive impact on beneficiaries' cattle productivity as evidenced by their average weight increasing 30 per cent, annual milk production increasing by 120 per cent and productivity by 99 per cent. The project had no impact on average weight of sheep or total value of livestock by-products excluding milk. Meanwhile, through having their awareness raised about the adverse livestock effects of overgrazing on productivity and the environment, project participants reduced their herd size by 29 per cent on average, compared with the control group. This reduced the ecological footprint of the beneficiaries while increasing their income and productivity.

These positive impacts are partly explained by increases by 13 percentage points the likelihood of using vaccination, 21 percentage point increase in probability of feeding of livestock in protected rangeland, 23 percentage point increase in use of stalls to house livestock, and 19 percentage point increase in likelihood of watering livestock from safer and healthier water points. As for pasture management, 52 percent of beneficiary farmers are 52 percentage points more likely to use rotational plans and 13 percentage points more likely to engage in restoration of degraded pastures vis-à-vis comparison group.



### Market

The impact on market access was limited, with no significant differences between beneficiaries and comparison group for livestock sold alive or for livestock by-products such as milk and eggs. Further, participants sold less meat than the comparison group perhaps to increase the weight of existing herd before sale or consumption. However, LPDP II households were 19 percentage points more likely to sell crops.



### Resilience

The attributable impact on increasing the resilience of LPDP II beneficiaries in the face of climate and non-climate shocks appears weak. The self-reported ability to recover from climatic shocks was lower for beneficiaries than for the comparison group. However, beneficiaries are half as likely to report experiencing climatic shocks suggesting that the project may have prevented noticeable climatic shocks from affecting treated households in the first place in relation to the comparison group.



### Nutrition

LPDP II had no impact on household food security or dietary diversity. All people in the sample, both beneficiaries and comparison group have tend to consume on average more than 8 of the 12 food groups considered – including cereals, tubers and vegetables – with no significant differences)



### Women's empowerment

LPDP II had positive impacts on women's empowerment. The project increased women-headed households' milk production by 19 per cent, value of livestock sales by 80 per cent and crop income by 114 per cent.

## Lessons Learned

### Improve livestock productivity sustainably



Project participants have increased their livestock income and productivity while reducing livestock herds and respecting rotational plans leading to lower environmental impact and ecological footprints.

*Recommendation.* Providing technical assistance in feeding practices, veterinary services, water points and reproductive issues while also raising awareness and social capital through the PUU on restoring degraded pasture through rotational use of pasture has helped beneficiaries avoid over exploitation of pasture resources. It is important to ensure this objective is maintained over time

### Beneficiaries less likely to experience shocks



Project participants were less likely than comparison group to report shocks experiences. This is likely linked to beneficiaries' herds being better adapted to climate change and animal diseases thanks to better quality animals, veterinary services and technical support.

*Recommendation.* The perception that households that suffer climate related shocks are less able to recover than the comparison group may also indicate a different level of awareness triggered by training and technical support. This also indicates the importance of increasing context specific investments to improve their resilience.

### Connect participants to market



Despite reporting an increase in livestock productivity, the project did not enable more households to sell their animals or livestock production in the output markets. It is estimated that only about 36 per cent of livestock producing LPDP II households sold livestock alive in the last year. In addition, less than 10 per cent of beneficiaries sold meat and milk in the market. Furthermore, beneficiary households were less likely to diversify their incomes beyond livestock or to raise different types of livestock than the comparison group.

*Recommendation.* Connecting farmers to the market infrastructure or buyers and investing in processing and agribusiness to transform products into food with longer shelf life could potentially increase income and generate a local economy multiplier effect. This indicates that future projects should integrate livestock production and pasture development with market access. Encouraging participation of beneficiary households in livestock value chains such as processing, storage, transportation and marketing of livestock products will also help diversify incomes while strengthening the value chain and the rural-urban link

### Women's empowerment



The project remarkably increased the welfare of women-headed households. However, it was less effective in empowering women to make decisions jointly with men or separately over assets in beneficiary households.

*Recommendation.* This is an important element to reflect on for similar future interventions. It indicates the importance of factoring in the gender dimension and promoting activities aimed at ensuring gender balance and women's empowerment within beneficiary households.



Investing in rural people

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#### About the brief

This brief draws upon the findings of an IFAD-funded impact assessment of the LPDP II project in Tajikistan which was prepared by Romina Cavatassi and Sinafikeh Gemessa.

R. Cavatassi, S. Gemessa. 2022. Impact Assessment Report. Livestock and Pasture Development Project II (LPDP II)

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