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IMPACT ASSESSMENT PLAN

Tajikistan

Livestock and Pasture Development Project I and II

(LPDP-I and LPDP-II)

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Table of Contents

Introduction 1
Theory of change and main impact assessment questions 3
Impact assessment design 8
Sampling and data collection 10
Workplan 1
References 1

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Introduction

The present document outlines a combined Impact Assessment (IA henceforth) plan for both the *ex-post* impact assessment of the Livestock and Pasture Development Project I (LPDP-I) and the *ex-ante* impact assessment of the Livestock and Pasture Development Project II (LPDP-II). The two projects offer an ideal setting for the conduction of a combined assessment of the baseline for the LPDP-II and of the impacts on key indicators of the LPDP-I, being the former a scaling up of the latter within the same framework, approach, theory of change and targeting strategy.

The implementation of LPDP-I started in 2011 and it is planned to be completed by September 2017, while LPDP-II started implementation from February 03, 2017 and it represents the scaling-up (or geographical expansion) of the former project.

The projects' goals and development objectives are aligned with those of the National Development Strategy (NDS) 2006-2015 and the Poverty Reduction Strategy 2010-2012 (PRS III) namely, (i) reducing poverty, (ii) improving nutritional status of rural households and, (iii) increasing income and employment rate. In order to achieve these goals, both projects target the households of the Khatlon region with the aim of i) enhancing livestock productivity and production in a sustainable manner; ii) augmenting sustainably the productive capacity of pastures and, iii) increasing women's ability to process and market livestock products and by-products.

Both projects entail three main components: a) the first component focuses on *institutional development* through the establishment of Pasture User Unions (PUUs, henceforth) in order to guarantee land rights to the members and to facilitate common pasture management and rehabilitation; b) the second component, namely *Livestock and Pasture Development*, comprises a number of activities aiming at improving livestock husbandry practices and increasing fodder production and ultimately livestock production; c) finally, the third component aims at empowering women by providing trainings and livestock packages specifically to vulnerable female-headed households.

The objective of the IA plan presented in this document is to provide a detailed description of all the elements needed to ensure a rigorous *ex-post* (for LPDP-I) and *ex-ante* (for LPDP-II) IA of the two projects. Successfully conducting an IA implies i) estimating the causal relationship between the projects' activities and the indicators measuring the intended impacts specified in the Theory of Change and in the Logical Framework, ii) understanding the mechanism through which the impacts occur or do not occur, iii) investigate the presence of spillovers and unintended impacts. Moreover, the information contained in this document shall serve the purpose of keeping track of the activities conducted for ease of understanding and for future reference of RIA staff members in charge of continuing and completing the ex-ante IA.

The effort towards conducting a rigorous ex-post IA for the LPDP-I and an ex-ante IA for the LPDP-II project should be seen in light of the reciprocal and shared willingness of all the actors involved to improve the understanding of the projects' performance towards the achievement of their objectives. Moreover, providing evidence of the effectiveness of the projects constitutes an invaluable opportunity for local governmental bodies to learn which mechanisms are more effective in benefiting the smallholders, how the projects succeeded in obtaining the benefits, which concrete actions could be taken to obtain even higher benefits, and how much the projects contributed to the

economic results of its beneficiaries[1] as well as to improving their welfare. The LPDP-I and LPDP-II offer a good opportunity in this regard given their aligned timeline, the identification strategy and targeting criteria of the beneficiaries (which offers opportunity for a good identification strategy of treated and control groups) as well as for the logic of the projects whose impact indicators can be constructed and measured. With specific regard to IFAD, this assessment constitutes part of a portfolio-wide set of impact assessments that will be used to assess the overall poverty-reduction impact of IFAD projects due to be completed by the end of its current replenishment period in 2018. Conducting rigorous IA is also of relevance to the governments of recipient countries, in this case Tajikistan, to help driving future policy making and investments. Last but not least, keeping in mind the limits in external validity, these IAs can be of interest to the wider development community in deepening the knowledge needed to measure effectively the impacts of agricultural development interventions building upon a hitherto neglected area of research (World Bank, 2011).

The rest of the document is divided into four main sections. The first section develops the Theory of Change (ToC) of the Project, which is built upon the Theory of Change presented in the Project Design Reports but adequately modified to respond to the specific requirements of the IA design, and formulates the main IA questions to be answered. The second section presents the IA design, describing the methodology and including the timing of the activities to be performed and how these relates to the timing of the Project's activities. Details of the sampling and data collection strategies are discussed in the third section, whereas the fourth and last section provides information on the workplan, the budget and deliverables.

[1] Henceforth we shall refer to *beneficiaries* as the group that received the treatment, while we will refer to *eligible* households as to those households that satisfied the targeting requirement, but may or may not have been selected to be part of the project's activities.

Theory of change and main impact assessment questions

The Republic of Tajikistan is a land locked country, where most of the territory (93%) is occupied by mountains. Poverty is quite widespread with about half of the country's population living below the poverty line. The poorest people in the country are in the Khatlon region, where 78 per cent of the population lives under the national poverty line and where land is degraded, the availability of inputs and credit is limited, irrigation facilities are lacking, and access to improved technologies and markets is poor (World Bank, 2015). Although Tajikistan has done a remarkable job in reducing poverty from 80 percent in 1999 to about 32 percent in 2014, the country has done less well in reducing non-monetary poverty. Recently available micro-data suggests that limited or no access to education (secondary and tertiary), heating, and sanitation are the most unequally distributed services.

About 50 per cent of the population depends on agriculture for livelihood, and most farmers lack access to adequate inputs, resources, technology and markets. Livestock is a key part of the agricultural sector and it is of critical importance in the livelihood strategy of poor rural households in Tajikistan. Prior to the fall of the socialist system, livestock production was based on an elaborate system aiming at securing animal feed in the winter based on (i) intensively–cultivated crops in large-scale state and collective farms, (ii) sizeable imports of concentrates and (iii) a centralized structure of pasture management and utilization. After 1991, the deterioration of these three pillars transformed the livestock husbandry system in Tajikistan from one based on intensive livestock farming to one based on extensive livestock husbandry. Today, the pasture management system in Tajikistan remains largely unchanged since Soviet times with the exception that the lowest rung in the management system (corporate farms) no longer has adequate resources for pasture upkeep nor an adequate management system. As a matter of fact, there exist a mere contradiction between the common use of pastureland without proper management and the private household livestock farms whereby livestock husbandry relies primarily on grazing supplemented by limited cultivated feed crops and minimal concentrates. The inadequacy of a such centralized management system is reflected in the overexploitation of pasture, free-riding behaviours and conflicts between villages over the use of the surrounding land. This extensive livestock production system has led to a vicious cycle of ever-lower animal yields and rural income which is triggered by the legitimate will of farmers to increase their livestock production by adding animals units which in turn has created a greater demand for limited feed, leading to a decrease in the feed per animal ratio, to a deteriorarion of the grazing land and to a further fall in animal yields. As a result, the rise in livestock inventories coupled with the fall in feed supplies has meant the dramatic fall of livestock productivity, low milk and meat yields and land degradation in the country further worsening poverty among households.

To achieve higher growth, in addition to implementing a deeper structural reform agenda aimed at reducing the role of the state in favour of the private sector; expanding and modernising social cooperation and inclusiveness; and strengthening country's connection to regional and global markets and knowledge, the Government of Tajikistan seems strongly committed to the agricultural reform program, which includes the resolution of the cotton debt crisis, accelerated land reform including strengthening households' land-use rights and freedom to farm, improved access to rural credit and input and increased diversification of agriculture.

Last but not least, large migration rates towards Russia and in other countries of the former Soviet Union have been depleting the country's human capital since the civil war. However, their

remittances, estimated to amount to about 36 per cent of gross domestic product (GDP), have boosted incomes and have helped reduce poverty in the households they left behind and determining a labour force mainly driven by women particularly in the agriculture sector (75% of working women engaged in agriculture), even though only 13 percent of Dekhan farm owners are female (Jones et al, 2007; PRSP 2010-2012).

The LPDP-I and LPDP-II are meant to address the above mentioned development problems through different activities interlinked and hopefully synergic. Graph 1 presents the list of activities implemented through the projects and the causal mechanisms that are expected to lead to the desired impacts (i.e. Theory of change). The theory of change is the result of the work of the RIA team with the crucial contributions gathered from the discussions with the Project Management Unit (henceforth, PMU) and the direct beneficiaries of the projects.

Component 1: **Institutional strengthening:** the set of activities related to the first component entails the establishment of a decentralized management unit for pasture, namely the Pasture User Unions (PUUs, henceforth). PUUs are created at the village level with the intent to acquire the formal legal rights for pasture use, which are transferred directly to the members. Once the legal setting of the union has been set up, the board of the members pools together the resources needed for the maintenance of the pasture land, creates a rotational plan and the union becomes the channel through which the need-specific project's activities are implemented. The legal framework created by the PUUs should decrease the disputes and conflict over land use both between members of the community and nearby villages. Moreover, by setting individual responsibilities on each member, the internal organization of the PUUs is expected to decrease free-riding behaviours which usually lead to overexploitation of pastures and consequent land degradation. In addition to this, the implementation of a rotational plan for pasture is expected to increase land available for grazing in a sustainable manner thereby contributing to sequestration of CO2 and therefore to mitigation of climate change. At the Jamoat[2] level, this component should translate into greater community cohesion and improved quality of pasture land.

Component 2: Livestock and pasture development: this component aims at providing farming equipment, improved seeds and fertilizers, building water points and sheds, improving access to rams for breeding and veterinary services to households. These activities should lead to an increase in water availability for livestock, a reduction in the incidence of animal disease and self-sufficiency in fodder and grass production for the harshest seasons when pastures cannot be reached. The expected deriving outcomes entail benefits at the household level such as increased milk production, livestock productivity, income and food diversification.

Component 3: Women Income Generation Activities: this component is expected to improve women livelihood conditions by widening the spectrum of income generating activities available. In particular, it provides small ruminants, poultry and bee-keeping packages to female household-heads, which are expected to increase their income and, thus increase their bargaining power in the household decision-making process.

The three components of the projects are inter-linked and are expected to act together in increasing income, reducing malnutrition (especially among children), reducing poverty and achieving food security while contributing to climate change mitigation. The efficiently planned use of pastures should rehabilitate fertility of degraded land due to overgrazing thereby contributing to adaptation to climate change (through sheds, water points and distribution of seeds) but also contribute to climate

[2] The administration system in Tajikistan is hierarchically organized as follows: (i) Oblast (region) which are divided into (ii) Hukumat (district) which in turn are subdivided into (iii) Jamoat (village-level self-governing units) and then (iv) villages.

change mitigation benefits produced by rehabilitated pastureland. Moreover, given the gender dimension component, it is expected that the LPDP will lead to greater women empowerment smoothing the negative impacts of high rates of male migration.

Part of the challenges in conducting a rigorous IA relate to the proper identification of spillover effects and unintended impacts. The importance of taking into account spillover effects lies in the fact that it may imply a double underestimation or overestimation of project's impacts. In our particular case, since the veterinary clinics built and equipped by the project are freely accessible, we may suspect that not only households from eligible villages but also those from control villages may benefit from them. If this is the case, by simply comparing eligible and ineligible households, we would be (i) underestimating the effect of the provision of veterinary services on the treatment group and (ii) ignoring the positive effect of the treatment on the control group, leading to wrong policy recommendations (Angelucci and Di Maro, 2010). For this reason, it is also important to take into consideration the role played by the possible reduction in the likelihood of contagion when estimating the effect of veterinary clinics services on the incidence of animal diseases and mortality.

On the other hand a properly managed pasture land combined with plots dedicated to fodder production through distribution of forage seeds, may produce not only the private benefits of increased fodder but also the off-site public benefits linked to increased soil fertility and reduced land erosion thanks to rotational plan and, last but not least, the global public benefits represented by CO2 sequestration and its consequent contribution to climate change mitigation.

Another dimension to be considered is the estimation of unintended change to the group of beneficiaries due directly or indirectly to the projects. During the meetings held in the villages where LPDP-I was implemented, the beneficiary households reported an increase in school attendance among their children thanks to a greater availability of income but also to a relaxed time constraint for the children who are not requested to collect water for the animals any longer. Moreover, all the farmers pointed out the possibility to rent at a reasonable cost the farming equipment bought collectively by the PUUs.

The LPDP- I and II are implemented in selected districts of the Khatlon region which is the poorest region of the country with poor and very poor households comprising 78% of the total population[3] The two projects use slightly different targeting approaches to select the beneficiaries. For LPDP-I the eligible villages were selected from Muninabad, Khovaling, Baljuvon, Sharabad and Temurmalik districts using the following criteria:

- Jamoat with livestock carrying capacity of pastures below 5;
- Villages with livestock carrying capacity of pastures below 5;
- Villages with more than 50 households in the first three districts and more than 20 households in the remaining two districts.

The intention of the LPDP-I design was to also cover Farkhor and Vose districts. As explained by the PMU, due to the reduced available funding caused by the depreciation of SDR against USD, these two districts were postponed to the second phase (LDPD-II)[4].

For LPDP-II, the selected districts are Vose, Dangara, Kulob, Hamadoni and Farkhor, in which the eligible villages are selected using the following criteria:

- Jamoats with livestock carrying capacity of pasture below 5;
- Villages with pasture area above 50 hectares;

[3] Poverty figures obtained using Living Standards Measure Study-2009 data by World Bank.
[4] For more details, please refer to the *LPDP-I Supervision Report 2016*.

- Villages with more than 50 but less than 500 households.

The only difference between the two selection criteria applied to the projects lies in the criteria regarding pasture applied at the village level. In particular, for LPDP-I this measure is the ratio between total pasture area in hectares and the total number of animals in sheep unit[5]. On the other hand, in LPDP-II only the pasture area is taken into consideration.

In the original targeting of LPDP-II a more sophisticated measure was meant to be used. That is, the pasture carrying capacity was calculated as the ratio between the total amount of green mass available divided by the livestock inventory weighted by the feeding needs of each aninaml type. With this carrying capacity ratio, the LPDP-II carrying capacity definition implied a stricter selection than the LPDP-I and, as such, some of the villages selected for LPDP-I would not be selected in LPDP-II, ceteris paribus. On the other hand, the latest targeting criteria of LPDP-II is less stringent thus closer to the one applied for LPDP-I.

It is worth noting that even though the original targeting criteria is conceived from jamoat down to the household level, once a village has been selected to participate to the projects, there is perfect compliance at the village level, that is the totality of the households accept to be part of the PUU.

The following are the key evaluation questions that will help assess the program's impact:

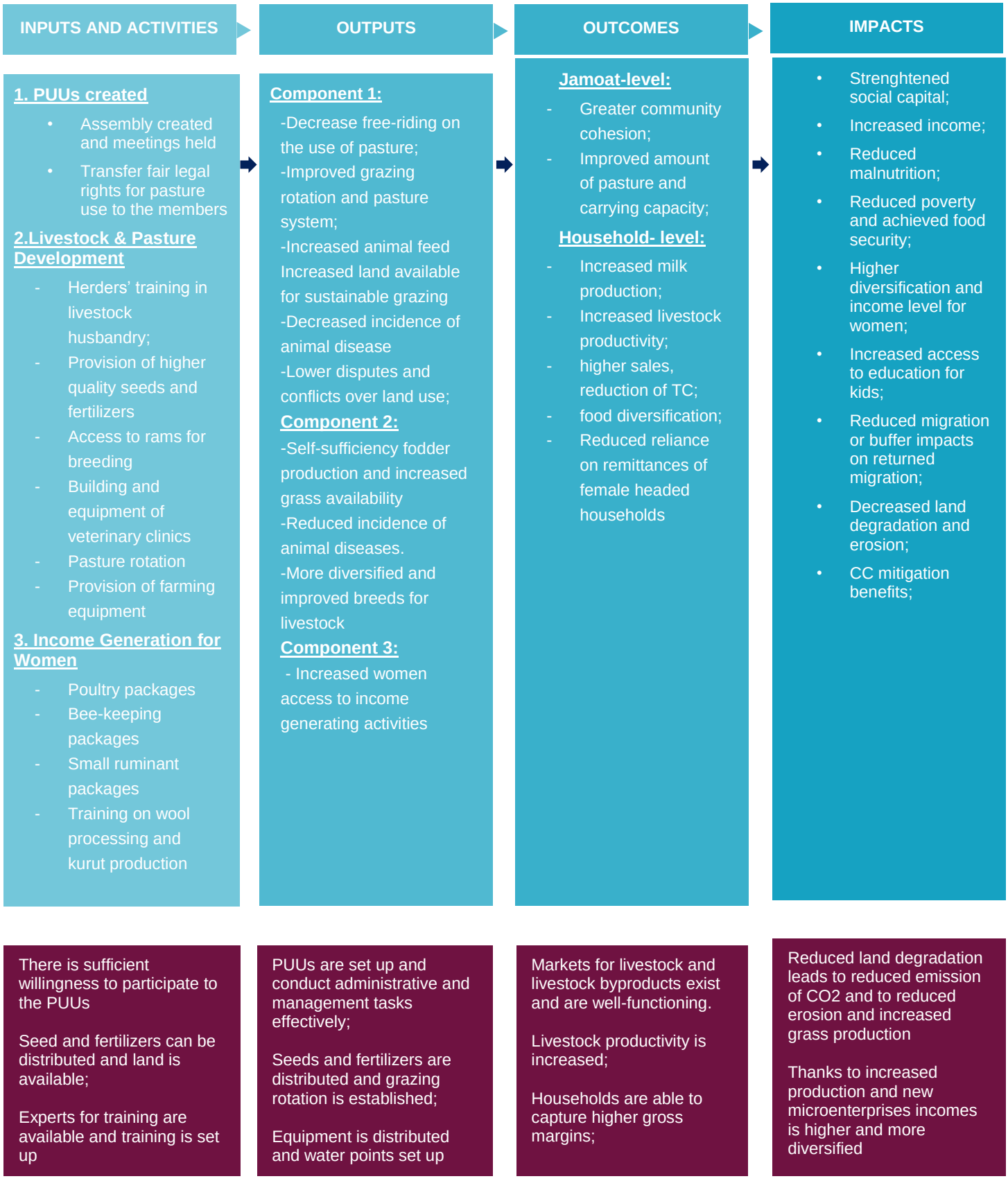
- Does the nutritional status and income of beneficiaries increase?
- Is there an increase in income and employment among women as compared to control group?
- Does CO2 sequestration increase?
- Has there been a buffer role in returning migration?
- Does degraded pasture restore and will it be less prone to land erosion?

What are the mechanisms to achieve the above mentioned objectives?

- Does livestock productivity increase?
- Does milk production increase?
- Does the amount of fodder and feed for animals increase?
- Do new microenterprises lead by women increase in the beneficiary villages?

[5] Sheep unit is a procedure to standardize different livestock types into one unique measure based on their forage consumption. According to this measure, a cattle corresponds to 5 sheep, a horse to six sheep and a donkey to three in terms of consumption.

Graph 1: The project's Logic of Intervention



Impact assessment design

The LPDP-II is conceived as the scaling-up of the LPDP-I and will start being implemented during 2017 with few months overlapping with the LPDP-I. The timeline of the two projects gives us the opportunity to conduct the ex-ante and the ex-post IA in the most cost-efficient way, by exploiting the treatment and control group of LPDP-II to find a valid control group for LPDP-I. In particular, we are planning to interview three different sample groups:

Table 1: Survey samples.

Group 1	Treated villages of LPDP-I
Group 2	Treated villages of LPDP-II
Group 3	Non-treated villages of LPDP-II

Group 1 is the treated villages of LPDP-I, group 2 will be selected among the treated group of LPDP-II and shall serve at the same time as a control group for the ex-post Impact assessment of LPDP-I and group 3 is the control group for the ex-ante IA of LPDP-II.

The main challenge for identifying impacts is to find a valid control group that has the same characteristics as the treatment group in the absence of the program. When the only difference between the treatment and comparison groups is that the members of the treatment group receive the program, while the members of the comparison group do not, the observed difference in outcomes can be entirely attributed to the program and the causal impact of the program can be identified (Ravallion, 2005).

Once the villages that comply with the eligibility criteria have been identified, finding a valid control group would require to randomly allocate the villages in the treatment and in the control group.The random selection of the treatment group out of the set of villages that satisfy the targeting criteria of the project would ensure that the members of the two selected groups would be asymptotically the same in terms of observed and unobserved characteristics.

Given the criteria used for selection of both LPDP I and LPDPII and after careful consideration of data available, the preferred identification strategy to construct the counterfactual for this IA consist in conducting a Propensity Score (PSM) approach to select non-beneficiary villages with similar characteristics to beneficiary villages in project's targeted districts of the Khatlon region using in addition to population, carrying capacity and pasture area, some additional key characteristics such as altitude, Natural vegetation index (calcutated through GIS tecniques) and access to road and infrastructure.

The idea is to find, from a large group of non-participants, villages that are "observationally" similar to selected villages not only in terms of pasture area but also in terms of additional characteristics not affected by the projects. Using PSM, each treated village is matched to a non-selected village on the basis of a single propensity score, reflecting the probability of being selected to be part of the project conditional of their observed characteristics.

One of the main assumption on which the PSM relies is the *common support* or *overlap condition.* This condition ensures that treatment observations have comparison observations “nearby” in the propensity score distribution. Treatment villages, thus, have to be similar to non-treatment villages in terms of observed characteristics unaffected by participation in addition to being eligible using

LPDP-I targeting criteria; hence, some non-treatment units will be dropped to ensure comparability. We therefore first selected from the list of villages belonging to the districts of LPDP-II, those villages that:

1. Reside in a Jamoat with carrying capacity above 5;
2. Have a pasture area of more than 50 ha;
3. Have more than 50 but less than 500 households.

The above mentioned criteria are the same as those applied for the selection of beneficiaries of LPDP-II, with the only exeption of the Jamoat criteria. Given that both the project implementation and the impact evaluation are at the village level (and not at the Jamoat level), loosening this criteria, but keeping all the others constant, can be considered the less harmful option available.

Applying these criteria, gives us the following number of selected of villages by district.

Table 2

Districts	Nb. Of Villages	NB. Of Households
Vose	15	4143
Denghara	0	0
Kulob	14	2754
Farkhor	9	2550
Hamadoni	4	656

In addition to this selection, we added all the villages of the targeted districts of LPDP-II that satisfy the targeting criteria of LDPD-I, but nevertheless have not been selected to participate to LPDP-II. Obtaining the following:

Table 3

Districts	Nb. Of Villages	NB. Of Households
Vose	20	8303
Denghara	13	5538
Kulob	21	5275
Farkhor	9	3309
Hamadoni	12	6344

On a stepwise approach we will first match Group 2 to Group 1 in order to select a control group for the LPDP I for the ex-post impact assessment, whereas from the list of non-participants villages in the Kathlor region reported in table 3 above we will match to both group 1 and group 2 so to obtain Group 3 that is the control group for the ex-ante Impact Assessment of LDPD-II. This will ensure consistency across the three groups. In order to apply this methodology we will rely on collection of some key data and variables sourced at village level from the Household and Agriculture Census data from the national office of statistics of Tajikistan.

The data collection for LPDP-II will be carried out at PUU and Household level at baseline, mid-term and when the project will be completed (follow-up) on Group 2 and Group 3, while only one round for Group 1 is needed, although sustainability of impacts could be measured through the following surveys also Group 1.

Once the data have been collected, a second round of PSM will be conducted at HH level to ensure a proper balanced sample with good common support that would allow estimation of impacts for the

key indicators of interest for this project. This will involve calculating the average difference in the outcomes of interest of pairs of treatment and control households that have been matched. The effectiveness of this latter round of matching is contingent on a large number of high-quality matches being available from the sample of treatment and control households, which explains why the first round of matching will be conducted, so that the likelihood of good matches being available is maximised.

Sampling and data collection

Power Calculation

Statistical power calculation is performed to establish the number of households to be surveyed. With this purpose the following equation is used to estimate the optimal sample size (Winters et al, 2010):

$$N = \left[\frac{4\sigma^2(z_\alpha + z_\beta)^2}{D^2}\right] \quad (1)$$

Where D is the impact on the outcome variable measured as the difference in means, σ is the standard deviation, z_α is the critical value of the confidence interval (two tail test=1.96) and z_β is the critical value of the statistical power (two tail test=1.28).

It is a common practice to obtain a sample in two stages, in order to reduce sample dispersion. The first stage entails selecting the principal sampling units (PSUs), which in our case correspond to villages. Within each village, households are randomly chosen in the second stage. Using this two stage process implies the need for correction for intra-cluster correlation because the households within the same village tend to be similar. To correct for intra-cluster correlation we relied on the following formula:

$$N_{Corrected} = N[1 + \rho(m - 1)] \quad (2)$$

Where ρ is the intra-cluster correlation and m is the number of households to be interviewed in each village (cluster). The intra-cluster correlation adjustment is needed when we observe correlation of relevant observables variables within clusters of observations in the data. In our case, since the main outcomes relate to livestock productivity and income level, it is reasonable to suspect that households within the same village and thus using the same pastures and infrastructure, would experience similar outcomes changes both with and without the project.

In accordance with the Logical Framework of the project the following minimal detectable effect are expected:

Indicator	Increase	Decrease
Income from livestock	20%	
Total income	20%	

Child malnutrition	30%

In order to perform the power calculation on these indicators, we relied on both baseline data of the M&E system of LPDP-I and Living Standard Measurement Study (LSMS) 2009 by the World Bank.

Performing the power calculation gives us the following results for sample estimation:

Income from livestock	
Sample size un-corrected	738
Intra-class correlation	0. 09701
Average obs. per cluster	5
Minimum number of clusters	410
Sample size adjusted for cluster design	1025

Total household income	
Sample size needed	373
Intra-class correlation	0.0069768
Average obs. per cluster	9
Minimum number of clusters	88
Sample size adjusted for cluster design	394

Height for age	
Sample size needed	1096
Intra-class correlation	0. 022747
Average obs. per cluster	5
Minimum number of clusters	479
Sample size adjusted for cluster design	1196

In order to be sure to capture the effect of the project, it is common practice to choose the most conservative number as sample size. Thus, each group (see **Table 4**) will consist of 1200 households interviews.

Table 4

	Total Household	Number of villages	Number of households per district
Group 1	1200	60	240
Group 2	1200	60	240
Group 3	1200	60	240

Data Collection

The IA will include both qualitative and quantitative data collection. The qualitative data shall serve the purpose of collecting information from the experience of the beneficiaries and validate the

findings from the quantitative analysis. The sample will consist of Focus Group Discussions (FDGs) and Key Informant Interviews (KIIs) with key members of the PUUs and of non-treated villages. The qualitative analysis, complemented by data from the National Statistical office and data provided by the PMU will serve the purpose of providing support to final sample selection (at village and household level) as well as of finalizing the questionnaire for quantitative data collection. A GIS validation will also be performed for comparison of the Natural Vegetation index between Group 2 and Group 3 as opposed to Group 1.

Questionnaire

The main data collection instrument for this evaluation will be a household survey with detailed information on land tenure and land use, livestock grazing, livestock feeding and management, pasture use and pasture rotation, husbandary practices, feeding and vaccination, agricultural production, post-harvest and market sales, self-employment enterprises, and detailed information on union, access to credit and commercial activity. We will also conduct PUU level surveys. An outline of the questionnaire can be found in the **Table 5**.

Table 5: Structure of the Survey Instrument

Section 1	Socio demographic household members characteristics
Section 2	Education
Section 3	Anthropometric measures and nutrition
Section 4	Dwelling conditions
Section 5	Ownership of durable goods
Section 6	Food security and consumption assessment
Section 7	Resiliency
Section 8	Livestock: inventory, feeding practices, breeding strategies, health and vaccination, housing and watering, production of by-products.
Section 9	Agricultural production including labor and input use
Section 10	Other income sources, self employment, wages, enterprises
Section 11	Access to credit and utilization
Section 12	Migration: history and remittances
Section 13	Social capital (associations and women income generating activities)
Section 14	Common use of land and PUU participation (costs, management, benefits)

Impact and Outcome Indicators

Table 6 gives the impact and outcome indicators that will be part of the project's evaluation as well as their formula, frequency of measurement and means of verification:

Table 64: Impact and Outcome Indicators

Indicator	Measure	Source
Livestock productivity and diversification	Livestock herd (quantity and races by breeds) Milk production and productivity Livestock sales	Household survey
Animal by-products	Type and amount of dairy products	Household survey
Sales of livestock products	Value of livestock products sales	Household survey
Food security and nutrition	Anthropometric measures Food consumption	Household survey
Income from livestock, agriculture and other sources	Income by source Amount and source of sales Costs of production Consumption Nb. Of hours of labour per type of activity	Household survey
Asset index	Nb. And types of agricultural tools Nb. And type equipment	Household survey
Education	Frequency of attendance Nb. Of children enrolled School equipment Grade completed	Household survey
Access to credit and financial services	Incidence of request Amount requested Incidence of approval of credit request	Household survey
Women's income generating activities participation and social capital	Frequency of participation to association Composition of associations	Household survey
Rehabilitated pasture	Extension (HA) Amount of grass produced	GIS/Village
Reduced soil erosion	Siltation	Village survey
Access to infrastructure	Nb. Of wter points Nb. Of sheds Nb. Of veterinary facilities	Village survey
Pasture User Unions participation	Nb. Of participants Frequency of meetings	Village survey
Capacity building: herders, rotation and animal health	Frequency and type of trainings	Village survey

Workplan Baseline

Activities	IA calendar December 2016 – February 2018									
	Dec-16	Mar-17	May-17	Jul-17	Sept - 17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
Finalize IA design including sample and sampling strategy										
Prepare survey strategy and survey tools										
Recruitment of Survey company										
Send supporting letters to local authorities										
Conduct sampling and finalize survey strategy										
Conduct qualitative analysis										
Finalization of questionnaire, translation in Tajik and testing of CAPI script										
Enumerator training and Pilot Survey										
Data collection										
Data cleaning										
Data analysis										
Draft report										

Follow up

Activities	Calendar of activities					
	Sept/ Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021
Sampling for follow up and questionnaire adaptation and finalization						
Recruitment of enumerators						
Enumerator training						
Pilot survey						
Data collection						
Data cleaning						
Data analysis						
Draft report						
Validation of results						

Budget **Activity**	**Quantity**	**No. of days/units**	**Unit**	**Cost per unit (USD)**	**Total cost (USD)**
Inception meeting, desk study, training of enumerators					
Training venue rental	1	15	Days	120	1800
Enumerators per diems + meals and refreshments	80	6	Person days	15	7200
Project director in Tajikistan	1	15	Person days	180	2700
Project director in Kantar Public	1	15	Person days	1200	18000
Data programmer	1	12	Person days	500	6000
Other staff (FW and IT managers, logistics, etc.)	4	12	Person days	70	3360
Questionnaire Input/ design of qualitative tools (Kantar Public)	1	6	Person days	1200	7200
Pilot testing (local trips, small incentives for respondents, etc.)	70	3	Person days	30	6300
				Sub-total	52560
Sampling and Pretesting (All tools)					
Statistician (Tajikistan)	1	6	Person days	150	900
Sampling strategy and approval (Kantar Public)	1	8	Person days	800	6400
				Sub-total	7300
Fieldwork-Data Collection					
Enumerators per diem incl. Accommodation	70	30	Person days	25	52500
Drivers per diem incl. accommodation	6	30	Person days	30	5400
Incentives for Quantitive component	1	3600	Number	3	10800
Data checks and verification by Kantar Public	2	6	Person days	800	9600
Recruitment and facilitation of focus groups	6		Number	600	3600
Refreshments for Focus Group Discussions /Village/PUU Survey	1	6	Number	30	180
				Sub-total	82080
Transport					
Vehicle hire for Field Monitoring & FG support	5	20	Person days	30	3000
Fuel (liters-diesel)	150	20	Litres	1.5	4500
				Sub-total	7500
Professional fees					
Reporting (technical, progress and narrative final report)	1	14	Person days	1200	16800
				Sub-total	16800
Miscellaneous, Equipment, Stationery Supplies					
Printing paper for Field Manuals and Data Collection Tools	25	10	Reams	5	1250
Toner Cartridges	5	10	Number	10	500
Photocopying	100	10	Number	0.5	500
Communication (Domestic calls)	150	10	Number	1.5	2250
Laptops/Tablets	-	-	-	-	-
Stationary	2	10		10	200
				Sub-total	4700
				Total costs	170940
International travel costs & accommodation	3	12	-	400	14400
TOTAL					**185340**

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