



Investing in rural people

Kyrgyz Republic

Access to Markets Project

Final Project Design Report

Main report and appendices

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Currency equivalents

Currency Unit	=	KGS
US\$1.0	=	KGS69 (July 2016)

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

AHSC	Animal Health Subcommittee of PUUs made up of community vets and paravets
AI	Artificial insemination
AISP	Agriculture Investment & Services Project funded by IFAD & World Bank/IDA
APIU	Agricultural Projects Implementation Unit
ARIS	Community Development & Investment Agency
ATM	Automated teller machine
ATMP	Access to Markets Project
BAS	Business Advisory Services
COA	Chamber of Accounts
CN	Concept note
CLMU	Credit Line Management Unit
CU	Credit union
EAEU	Eurasian Economic Union
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia
EIB	European Investment Bank
ET	Embryo Transfer
ELISA	Enzyme-linked immunosorbent assay diagnostic technology
FSP	Financial service provider
FSU	Former Soviet Union
GDP	Gross domestic product
GoK	Government of Kyrgyzstan
GSCE PPR	FAO-OIE Global Strategy for Control and Eradication of PPR
FAO	Food and Agriculture Organization of the United Nations
FAO-TCP	Food and Agriculture Organization Technical Cooperation Project
FM	Financial Management
GAO	Gross Agricultural Output
HORECA	Hotels – Restaurants – Catering
HS Code	Harmonized System Code
HSN	WTO Harmonized System Nomenclature
IFAD	International Fund for Agriculture Development
IMF	International Monetary Fund
IRR	Internal Rate of Return
KfW	Kreditanstalt für Wiederaufbau (KfW Development Bank)
KGS	Kyrgyz Som (national currency)
KM	Knowledge Management
KLPRI	Kyrgyz Livestock and Pasture Research Institute
KSRVI	Kyrgyz Scientific Research Veterinary Institute
KVA	Kyrgyz Veterinary Association
LE	Leading Entity
LMDP	Livestock & Market Development Programme (I and II) funded by IFAD
LU	Livestock Units
MCCC	Milk Collection & Cooling Center
M&E	Monitoring & Evaluation
MFI	Microfinance institution
MIX	Microfinance Information eXchange
MoAM	Ministry of Agriculture and Melioration
MOF	Ministry of Finance
MOU	Memorandum of understanding

MT	Metric ton
NBKR	National Bank of the Kyrgyz Republic
NGO	Non-government organization
NPL	Nonperforming loans
OIE	World Organisation of Animal Health
Paravet	Veterinary para-professional ¹ or zoo-technician
PAR	Portfolio at risk
PC	Pasture Committee
PFM	Public Financial Management
PPL	Public Procurement Law
PPPPP (5PD)	Platform for Public-Private-Producers Partnerships Development
PPR	Peste des petits ruminants, a viral disease of small ruminants
PUU	Pasture Users Union
RIMS	Results Impact Management System
SBS	Small Business Support (EBRD)
SIVPSS	State Inspectorate for Veterinary and Phytosanitary Security or State Inspectorate
SME	Small and Medium Enterprises
SPS Agreement	World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures
SSBC	State Select Breeding Center
TA	Technical assistance
TOR	Terms of Reference
ToT	Training of Trainers
UN	United Nations
US\$	United States Dollar
VC	Value Chain
VtC	Veterinary Chamber
VCDBP	Value Chain Development Business Plan
WB	World Bank
WVA	World Veterinary Association

Definitions

Value chain actors in the context of the livestock sector comprise livestock farmers and their groups, service providers (e.g. vets, zoo-technicians), aggregators, agro-processing companies, food wholesale and retail outlets.

Smallholder is a livestock farmer owning up to 2-3 cattle and 10 small ruminants, or 5 LUs (Appendix 2 of the ATMP Project Design Report).

Livestock products category includes all types of red meat (beef, lamb, goat, horse meat, yak meat), of milk (cattle, yak, goat, sheep, mare milk), not edible offal (animal fiber, skins, hides, intestine), and apiculture products (honey, wax, royal jelly, bee-glue). The Project does not envisage support for the poultry industry.

Raw milk quality refers to debris and sediment; off-flavors, color and odor; bacterial and somatic cells count; chemicals content (e.g., antibiotics, detergents); composition and acidity.

Milk safety refers to biological, chemical and physical hazards to public health (human food-borne disease).

¹ Means a person who, for the purposes of the OIE Terrestrial Code, is authorised by the Veterinary Statutory Body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the Veterinary Statutory Body depending on qualifications and training, and in accordance with need.

Map of the Project area

Kyrgyz Republic

Access to Market Programme (ATMP)

Design report



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 | 05-08-2016

Executive Summary

Country context and sectoral strategy

Kyrgyzstan is a mountainous, landlocked country of 198,500 km² bordering Kazakhstan, Uzbekistan, Tajikistan and China. Ninety four percent of the territory is at an elevation of more than 1,000 meters, and 40 percent above 3,000 meters. Nearly half of the country's total area – some nine million hectares – is pastureland, which plays a key role in the country's economy, society, and culture. The population of Kyrgyzstan is 5.8 million of which 65% live in rural areas and depend predominantly on agriculture and livestock for their livelihood. With an average GDP per capita of US\$ 1,269 (2014), Kyrgyzstan is classified as a lower middle income country.

Although 65% of the population is rural, and 31% of the total workforce works in the agriculture sector, agriculture contributed only 15,9% of total GDP in 2015 – down from 34% in 2002. Despite its declining share of GDP, agriculture and livestock remain the backbone of the economy, providing substantial employment, playing a critical role in both household food security and consumer price stability, and as a leading source of exports. Livestock is an important source of income and food for rural families. Almost all farming households, including landless ones, own livestock. Livestock products represent a substantial part of the diet and as much as 20 percent of total food consumption.

With its favourable and highly diverse resource base the agriculture sector has the potential to achieve much stronger and more broadly based growth. A poor animal health situation and the lack of effective veterinary services are the two largest overriding limitations of further development of livestock primary production. The recent accession to the EAEU has increased the opportunities for both agricultural exports and imports. However, the ability to compete on the regional market is hindered by the lack of compliance with the EAEU technical regulation and phytosanitary and veterinary measures. While the national food industry is featuring healthy growth, rural households do not seem to benefit from this positive trend, which indicates little inclusiveness and distorted governance of the current setup of supply.

The overall framework for development in Kyrgyzstan is guided by the National Sustainable Development Strategy 2013-2017 (NSDS). Specifically for the agricultural sector the NSDS aims a.o. at: increasing production and quality of agricultural products; increasing export orientation; increasing import substitution/protection of the local producers; increasing the competitiveness of goods and; stimulating increased processing of domestic raw materials to increase value added. The ongoing IFAD country programme focuses on the two pillars of productivity enhancement in the livestock sub-sector: a rational and efficient use of the country's pasture resources, and improved animal health, nutrition and husbandry, with the strategic agreement that once these fundamental issues are being addressed, the focus of the programme should gradually shift to the commercial aspects of the sector.

Justification and rationale

Although livestock production contributes heavily to rural livelihoods, nutrition and food security, and to total agricultural sector output growth and exports, productivity is low and far below its potential. The main constraints that need to be addressed are inadequate animal feeding due to poor utilization of pasture resources, poor animal health, inappropriate farm management practices, and weak livestock marketing and processing. While the on-going IFAD programme is already addressing the three first obstacles, there is an increasing urgency of also addressing the obstacles to livestock marketing and processing in order to take a comprehensive and effective approach to developing the sector.

Kyrgyzstan has a high potential to broaden and strengthen its livestock sector thanks to a wealth of alpine pastures and a unique biodiversity of plants and animals. Accession to the EAEU has increased the opportunities for both agricultural exports and imports, and the Union has become Kyrgyzstan's major trading partner for agrifood. However, these changes have also exposed the

sector to much higher levels of competition in both domestic and regional markets, raising questions about its ability to compete and comply with the technical regulations of the Union.

There is a clear need to improve the products aggregation function within the livestock value chains (including cold chain infrastructure) in order to support processing expansion, while allowing smallholders to be part of — and benefit from it. Partnering with agro-processors is thus imperative, aiming at: setting quality standards for raw products, ensuring quality control and delivery mechanisms, and achieving a better managed seasonality of supply. Accordingly, the establishment of aggregation points will entail various positive externalities to the value chain development, in general, but primarily and directly to the benefit of smallholder farmers living in the vicinity of agro-processing units. These points also constitute a suitable convergence entry for diverse and complementary technical support, advisory interventions and input supply.

Project area and target groups

The Project has a national coverage and adopts a demand-driven approach. ATMP's primary target are smallholder livestock farmers who participate in and benefit from improved value chains. They comprise: (i) poor livestock farmers; (ii) female members of livestock owning households, including female heads; and (iii) other smallholder livestock farmers. The other beneficiary groups consist of: (iv) agribusinesses (agro-processors, traders/aggregators and retailers); (v) input suppliers and service providers; (vi) private vets; (vii) national scientific and academic institute staff; and (viii) the rural unemployed. Particular attention will be given to the participation of rural women and youth, individually and in groups, as producers and as processing and market entrepreneurs.

Project goal, objectives, outcomes and approach

The ATMP Goal is to contribute to increased incomes and enhanced economic growth in pastoralist communities. The Development Objective of the Project is improved access and integration of smallholder livestock farmers with remunerative markets for their products, leading to improved and equitable returns.

The ATMP will work with selected value chains and provide holistic and coordinated support to different actors in a way that will improve the chains' overall performance and outputs. The Project will invite champions in the preselected value chains who are willing to launch or deepen sound business models under productive partnerships with producers and other actors in the chains. Smallholder livestock producers, who are the Project's primary target group, will be represented in each selected value chain and expected to improve their income opportunities through better integration with the market. PUUs, facilitated by ARIS and building on the positive experience of the LMDPs I and II, will play an active role in identifying and mobilizing the target groups at the community level in a transparent and participatory manner, and ensure to avoid the elite capture of the Project opportunities and benefits. The Project's investments and activities will be executed through three components in addition to Project Management:

(1) Livestock Value Chains Development: This component, the outcome of which will be "capacity for sustainable, efficient livestock production, processing and marketing enhanced" will support efficient linkages and partnerships amongst livestock value chain actors, improved access to modern technology and Good Agricultural Practices with a specific focus on cold chain management and traceability. The subcomponent on **capacity building of livestock value chain stakeholders** will entail demand-driven capacity building and advisory services for the participants of pre-selected value chains driven by the Leading Entities (LE). Potential LEs are captured on the Kyrgyzstan Agribusinesses Map (see Appendix 4, Annex 3) that was developed by the design team in the aftermath of the pre-design End Market Assessment Study (February 2016). Once the LEs are identified, all the suppliers of raw material and service providers will be gathered to present the concept of a productive partnership, its modalities and benefits to farmers and other value chain participants. Selected proposals will be further elaborated by the Project-provided dedicated business advisory services facility into Value Chain Development Business Plans (VCDBPs). VCDBPs will be

ranked against key Project indicators and only those VCDBPs meeting minimum ATMP requirements will be used as a framework for preparation of individual grant projects or/and credit projects to be further presented to a Selection Panel. Value chain capacity building activities, e.g. training of farmers or agribusiness staff/management, organizing farmers into groups, etc., will be financed directly by the ATMP. The sub-component will also provide capacity building through training and on-farm demonstrations, piloting of innovative and climate smart technologies, targeted advisory services and exposure to the best international practices. The sub-component on **product aggregation enhancement** will address the issue of insufficient chain infrastructure for raw products collection and their quality and safety control. Eligible investment packages identified in the VCDBPs will be co-financed as follows: (i) to Leading Entities (largely agroprocessors and aggregators) – up to US\$100,000 on a 50% basis (i.e. up to US\$50,000 as a grant per investment package) - for the financing of collection and cooling centers, raw products testing equipment, small refrigerating trucks for milk/meat collection, access infrastructure; (ii) to groups of supplying farmers – up to US\$100,000 on a 80% basis (i.e. up to US\$80,000 as a grant per investment package) - for the financing of portable milking equipment, feed choppers and mixers, new feed crops varieties, animal sheds renovation, improved breeds, access infrastructure; (iii) to private veterinaries and zoo-technicians – up to US\$20,000 on 50% basis (i.e. up to US\$10,000 as a grant per investment package) - serving the selected value chains for the purchase of veterinary drugs/instruments and artificial insemination equipment. The sub-component on a **platform for public-private-producers partnerships development and knowledge management** will host a platform for the exchanges among actors in the value chains for better and innovative integration of market demand into production models. A contracted service provider will, through a series of periodic meetings, progressively enable stakeholders to identify, discuss and assess livestock sector constraints, priorities and build upon opportunities for investments; become conversant with “Public-Private-Producers Partnerships” business models; and develop value chain business and investment strategies. Progressively, the Platform will engage the decision-makers at local, regional and national levels with the aim of increasing their understanding of livestock development issues and supporting the development of a conducive regulatory and incentive framework for business development.

(2) The component of **livestock value chains financing** will have the outcome of “*efficiency and profitability along targeted smallholder-inclusive livestock value chains increased*”, to enable livestock value chain actors to increase their investment in profitable livestock value chains through the provision of grants (under Component 1) and by linking them with external credit lines. In addition, the Component activities will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers. The sub-component on **Access to External Credit Lines** will partner with existing financial institutions/projects targeting agricultural development to link them with the agricultural producers and processors identified and assisted through Component 1. The Project will sign a MOU with each of the partners – Financial Service Providers (FSPs) -outlining the eligibility criteria for prospective borrowers, which will be harmonized between the ATMP and the partners, as well as specific arrangements designed to link the Component 1 beneficiaries to the partner institutions. The subcomponent on **innovative financial products** will partner with those financial service providers interested in the development of innovative financial products and solutions for agriculture, and committed to piloting these products and documenting lessons learnt. An amount of USD 0.7 million will be allocated for this purpose to cover the costs of product development experts, possibly any necessary technological equipment, training of interested financial institutions, and the documentation and dissemination of lessons learnt. These products can include (but are not limited to) warehouse receipts finance and using digital tools to improve access to finance within value chains.

(3) The component on **upgrading the Kyrgyz livestock sanitary system** has the objective to strengthen key public and private sector arms of the Kyrgyz Veterinary Authority, which facilitate livestock commodity trade and safe food. The expected outcome will be “*the upgraded Kyrgyz livestock sanitary system*”, which would be measured by a 10% increase in official export of live animals and livestock products. The subcomponent on **strengthening the State Veterinary Sanitary**

System will assist the State Inspectorate for Veterinary and Phytosanitary Security (SIVPSS) to demonstrate its equivalency with sanitary standards of trading partners in the EAEU. To facilitate this, the Project will invest in upgrading selected public vet service ‘critical competencies’ as defined by the OIE in order to meet international standards. Significant investment will focus on upgrading skills and competence of the SIVPSS staff and supporting the government for animal identification in selected value chains. The project also will support capacity building for strengthening 11 key critical competencies, which would allow the SIVPSS to move from Stage 1 to Stage 2 of the FAO-OIE Global Strategy for Control and Eradication of Peste des Petits Ruminants (FAO-OIE GSCE PPR). Particular focus will be on establishing an active disease surveillance system. Further, technical assistance will be provided to the SIVPSS for establishing an accredited veterinarian system. The SIVPSS is tasked with permanently identifying livestock in the country as a recommendation by the EAEU veterinary inspection team and as an international standard under the OIE Terrestrial Code. A **functioning animal identification system** will support the SIVPSS’s argument for equivalency of the Kyrgyz veterinary sanitary system. The FAO assisted the government in this field by designing an animal identification database, which is ready for field testing in 2016–2017 by the SIVPSS in three districts. The Project will support the government’s animal identification system by following on from these pilot studies with technical assistance for field staff, ear tags, contracts for field staff, and supervising research institution and database maintenance contracts. The sub-component on **Strengthening the Private Veterinary Practice System** will provide support to the Kyrgyz Veterinary Association (KVA) through an allocation for study tours, technical assistance, office equipment and communications, translation and publishing of technical training materials and, most importantly, for training Master Trainers (plus contracted subject matter specialists) to provide practical, current continuing education for upgrading skills of community-based veterinarians and paravets. Support will also be provided to the Kyrgyz Veterinary Chamber: The IFAD/World Bank-funded AISP helped establish a Kyrgyz Veterinary Chamber as an essential structure, the Veterinary Statutory Body, according to OIE standards. The Kyrgyz Veterinary Chamber is now functioning well, is the first Veterinary Statutory Body among countries in Central Asia and is recognized internationally for its innovative and professional activities. The project will limit its support to larger server capacity (for additional databases), updated computers, printers and internet communication equipment. One study tour is planned to observe operations and organization of one or more European country veterinary chambers. The sub-component on **strengthening the supporting state institutions** will support the two relevant State research institutes, the Kyrgyz Livestock and Pasture Research Institute (KLPRI) and the Kyrgyz Scientific Research Veterinary Institute (KSRVI) via contracts to develop and deliver innovations in their particular research and competence spheres as well as deliver innovations suggested by the Project.

In terms of **organizational framework**, the two major institutions that are key to successful implementation of on-going IFAD financed projects and other projects are the Agricultural Projects Implementation Unit (APIU) under the Kyrgyz Republic Ministry of Agriculture and Melioration (MoAM), and the Community Development and Investment Agency (ARIS). These institutions will have the prime implementation responsibility for the ATMP as well. The **MoAM** will be the implementing agency for the Project. The **APIU** will have overall responsibility for Project implementation, coordination, oversight and reporting to IFAD and the government. That includes liaising closely with ARIS, which will operate a relatively independent series of activities, but will nevertheless be accountable to APIU as part of the Project implementation team. **ARIS** will have overall responsibility for all Project implementation at the community level, focused on PUUs and smallholders’ groups including the administration of all Project grant funds.

Expected Results and Benefits

Expected Project results include: increased farm-level livestock production/ productivity; higher quantity and quality of livestock input to processing and consumption; reduced losses during storage and transportation; flatter seasonal supply and more stable prices to producers and produce collectors; enhanced overall processing quality and efficiency; greater product diversification; and

increased commercialisation of the sector providing expanded employment and increased incomes among the beneficiaries. The Project is expected to reach approximately 28,000 households, with various and complementary activities and investments. The Project is expected to lead to increased income of farmers, households and rural entrepreneurs. Benefits would accrue from: (i) increased livestock productivity and increase in livestock produce due to the application of improved inputs/technology and enhanced husbandry; (ii) an increased proportion of marketed farm produce; (iii) reduced losses during production and processing of dairy and meat produce through innovative technology; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs; (v) revival and increase of export of livestock commodities; (vi) avoided costs of zoonotic diseases (PPR and others) due to improved animal sanitary system; (vii) enhanced access to larger and longer-term credit; (viii) increased employment, either for hired or family labour, for both on-farm and off-farm activities; and (ix) tax revenues as a result of increased volume of taxable production.

The economic analysis of the overall Project indicates that the gains of the total investments, under the ATMP, are significant and robust in economic terms. The analysis results in an internal **economic rate of return (IERR) of 19 per cent** and a NPV of US\$45.0 million taken over 20 years with the benefit stream based on the quantifiable benefits that relate directly to the activities undertaken by the Project.

Cost and financing

The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 55.4 million (KGS 3.9 billion). Physical and price contingencies are low at 2% of the total Project costs due to the fact that investments associated with the various grants and external credits represent around 66% of the total Project costs (expressed as a lump sum, no contingencies). The foreign exchange component is estimated at US\$ 29.5 million or about 53% of the total Project costs. Taxes and duties make up approximately US\$ 1.18 million. The project management cost makes about 3% of the total Project costs.

The Project will be financed by an IFAD loan, US\$12.7 million (23% of the total Project costs), an IFAD grant of US\$12.7 million (23% of the total Project costs). It is expected that the FSPs' contribution would be US\$20.0 million, which would be used to finance 78% of the Livestock Value Chains Financing Component. The Government contribution is estimated at US\$ 1.6 million (3%) and includes contributions from its budget primarily to cover a part of SIVPSS O&M costs as well as all taxes (see below). The project beneficiaries' contribution is estimated at US\$8.39 million, which would be used to finance 20.8% of the Livestock Value Chains Development Component and 19.5% of the Livestock Value Chains Financing Component.

Assumptions and risks

Key Project implementation assumptions are that the country's economy maintains its stability, and that consistency is established between the stated government policies/ and rural economic reforms supporting private sector development and the agriculture sector *vis-à-vis* the actual implementation of these policies and reforms. Moreover, it is assumed that the endemic animal disease situation in the country remains stable and Kyrgyz authorities implement all the major EAEU requirements in terms of biosecurity and food safety. The main risk relates to potential failure in correctly aligning the incentives for the various actors, farmers, companies and FSPs expected to participate in the Project. Mitigating measures include an in-depth, participatory analysis of production/ business opportunities, input and other constraints, and actual financial risks, based on formulated bankable business plans.

Adherence to IFAD policies and guidelines

The design of the ATMP is fully compliant with IFAD's policies on: Targeting, Gender Mainstreaming, Rural Finance and Climate Change, and it is fully aware on the new Social, Environmental and Climate Assessment Procedures, and will seek their compliance in Project implementation at operational and field levels.

Sustainability, knowledge management and scaling-up

The sustainability of the Project's results is, inter alia, based on: (i) the value chain champion business and technical capacity building activities to be promoted; (ii) the demand-driven nature of the intervention; and (iii) the preparation of VCDBPs as the basis for all investment which should lead to better integrated and more equitable and profitable value chains.

To ensure capture of experience gained (learning), comprehensive provision has been made for M&E of Project activities and for a participatory approach to the operation of the Project's proposed Management Information System (MIS). The Platform for PPPP is expected to play a major role in consolidating Project learning.

The Project takes a pilot approach to the development of efficient, sustainable livestock value chains development in Kyrgyzstan, including the field testing of innovative technology and associated capacity building of supporting institutions. The experiences so derived will be scaled up/replicated in other parts of the country where similar value chains exist. This also involves major potential for scaling up and synergies in relation to subsequent donor programmes.

Logical Framework

Results hierarchy	Indicators						Means of Verification			Assumptions (A) / Risks (R)	
	No	RIMS code	Name	Unit of measurement	Baseline	Mid term	Final target	Source	Frequency		Responsibility
Goal											
Contribute to the reduction of poverty and enhanced economic growth in pastoralist communities	1	N/A	Rural households in the Project area who have increased their index of household assets' ownership by 15%.	HH	-	-	28000	RIMS baseline and impact surveys at completion Health statistics Studies to complement indicator based data	Baseline, Completion	APIU	Overall political stability and a conducive macro-economic framework (A) Regional economic trends counteract project achievements (R)
	2	N/A	Reduction in the prevalence of child malnutrition as compared to baseline.	%	-	-	-10				
Project Development Objective											
Improved access and integration of smallholder livestock farmers with remunerative markets, leading to improved and equitable returns.	3	N/A	Value of livestock products sold by targeted farmers in Project area increased.	%	-	-	30	Project baseline study, mid-term review and implementation completion report Specialized (qualitative / quantitative) thematic studies Household income surveys	Baseline, Mid term, Completion	APIU	Government policies and rural economic reforms supporting smallholders, private sector development and the livestock sector are implemented (A) Regional free trade agreements (EAEU) provide fewer opportunities for Kyrgyz livestock exports than anticipated (R) Endemic animal disease situation in the country remains stable (A)
	4	2.5.1	Creation of employment opportunities: number of jobs generated by small and medium enterprises [through livestock related farm work/processing]	ppl	-	-	2 800				

Outcomes/Outputs											
OUTCOME 1: Capacity for sustainable, efficient livestock production, processing and marketing enhanced	5	.	Increase in margins generated by participating smallholders from sale of animal products	%	-	-	10	Project baseline study, mid-term survey and completion survey Reports from each participating processors/aggregators Government's national, regional and local production data Targeted field studies and surveys	Baseline, Mid term, Completion	APIU	
Output 1.1 Livestock Value Chain Stakeholders' capacity is built	6	1.5.4	Enterprises accessing facilitated non-financial services [VCDBPs prepared]	Nr	-	50	100	Project's records	Biannual	APIU	Lack of incentives on the part of various value chain actors to participate in the Project's activities and financing (R) Effective/timely availability of specialized technical assistance (A) Producer-Processor/Aggregator contractual obligations are not fully observed (R)
	7	1.2.8	Crop/livestock production groups formed/strengthened	ppl	-	5 000	26 500				
Output 1.2 Production and processing enhanced	8	N/A	Investment packages (value, nr of direct beneficiaries)	ppl	-	50	250	Project's records	Biannual	ARIS	
Output 1.3 Platform for PPPP and KM operating sustainably	9	N/A	National Platform for PPPP and KM with broad, gender equitable livestock value chain representation (at least 30% women) meeting systematically at regional and national levels	Nr	-	1	1	Project's records	Biannual	APIU	
OUTCOME 2: Efficiency and profitability along targeted, smallholder-inclusive livestock value chains increased	10	2.3.3	Sustainability: Improved performance of the financial institutions [portfolio at risk below 10%]	PAR (%)	N/A	<10	<10	Project baseline study, mid-term survey and completion survey Participating Financial Institutions' records National Bank supervision reports Targeted field studies and surveys	Baseline, Mid term, Completion	APIU	Banking/financial market norms and regulatory framework, conducive to expanded rural financial outreach and inclusion (A) Depending on the Kyrgyz Russian Fund's capacity to adapt to

Output 2.1 Increased access to external credit lines	11	1.3.10	Value of gross loan portfolio (individuals+enterprises)	MUSD	-	5	20	Participating Financial Institutions' records	Biannual	APIU, PFIs	project approach, and level of cooperation (A) Depending on PFI cooperation (A)
Output 2.2. Increased access to innovative financial products	12		Innovative financial tools piloted	Nr	-	-	10	Participating Financial Institutions' records	Biannual	APIU, PFIs	
OUTCOME 3: Upgraded Kyrgyz livestock sanitary system	13	2.4.1	Producers benefiting from improved access to markets (at least 10% increase in official export of live animals and livestock products)	%	-	-	10%	Project baseline study, mid-term survey and completion survey EAEU reports National statistics Periodic random brucellosis serosurvey in small ruminants PPR Regional Advisory Group reports OIE reports	Baseline, Mid term, Completion	APIU	Outbreak of a notifiable transboundary animal disease (R) Willingness of private vets to participate (A)
Output 3.1 The SIVPSS demonstrates the equivalence of the Kyrgyz livestock sanitary system with other veterinary service sanitary systems in EAEU countries	14		Laboratories equipped to international standards	Nr	-	-	2	Project's records SIVPSS records	Annually	APIU	
	15		The FAO-OIE Peste des Petit Ruminants control strategy in Kyrgyzstan moves from Stage 1 to Stage 2;	Nr	-	-	1				
Output 3.2 Kyrgyz Veterinary Association strengthened	16		Induction courses are provided for at least 400 private vets	ppl	-	100	400	KVA records	Annually	APIU	
Output 3.1 Kyrgyz Livestock and Pasture Research Institute (KLPR) and Kyrgyz Scientific Research Veterinary Institute (KSRVI) strengthened	17		Use of bovine artificial insemination services increases by at least 15% in at least one oblast	%				KSRVI records	Annually	APIU	

[1] All indicators will be disaggregated by gender, poverty, farm type and youth categories; [2] RIMS 1st level indicator; [3] Baseline will be conducted during the first year of the project and the logframe will be complemented with baseline values accordingly

I. Strategic context and rationale

A. Country and rural development context

Country economic situation

1. Kyrgyzstan is a mountainous, landlocked country of 198,500 km² bordering Kazakhstan, Uzbekistan, Tajikistan and China. Ninety four percent of the territory is at an elevation of more than 1,000 meters, and 40 percent above 3,000 meters. About 45 percent of the land is considered not suitable for human habitation. Nearly half of the country's total area – some nine million hectares – is pastureland, which plays a key role in the country's economy, society, and culture. The population of Kyrgyzstan is 5.8 million of which 65% live in rural areas and depend predominantly on agriculture and livestock for their livelihood, but remittances also play an important role as an income supplement. Life expectancy for men is 65 years and for women 73 years. In 2011, the average household size was 4.9 members with rural households being larger than urban (5.3 versus 4.0 members). With an average GDP per capita of US\$ 1,269 (2014), Kyrgyzstan is classified as a lower middle income country.
2. The country experienced a recovery of the economy in the relative political stability following the unrest in 2010, culminating in a growth of 10.9 percent in 2013. Growth slowed to 3.6% in 2014 as the economies of Russia and Kazakhstan weakened and local currency depreciated by about 19%. With economic contraction in Russia, growth slowed down in 2015 to 4.8% year on year in January-October owing mainly to the regional recession triggered by the depreciation of the Russian rouble. Inflation is estimated at around 6.5% in 2015. Continued low global food and fuel prices will limit inflationary pressures in 2016. Depreciation of the Kyrgyz currency and harmonisation with Eurasian Economic Union (EAEU) tariffs will likely contribute to inflationary pressures in 2017². The EAEU, which Kyrgyzstan joined in May 2015, allows for the free movement of labour, goods, services and capital within the bloc comprising Russia, Kazakhstan, Belarus and Armenia. On the other hand, trade prospects with countries outside the Union are hindered by the gradual erection of common external trade tariffs. Most notably it will weaken import trade with China and damage re-exports to neighbouring Tajikistan and Uzbekistan.
3. **Agriculture.** Although 65% of the population is rural, and 31% of the total workforce works in the agriculture sector, agriculture contributed only 15.9% of total GDP in 2015 – down from 34% in 2002. Main reasons are limited access to agricultural machinery and inputs by smallholder farmers, and decline in public expenditure towards agriculture; as well as the proportionally higher growth of the industry sector and services. Despite its declining share of GDP, agriculture and livestock remain the backbone of the economy, providing substantial employment, playing a critical role in both household food security and consumer price stability, and as a leading source of exports, with food exports comprising 28.5% and agricultural raw materials 3.8% of all merchandise exports in 2013. Total gross agricultural output in 2014 was USD 3,034.3 million with crops and livestock accounting for about 50% each.
4. The agricultural economy of Kyrgyzstan is based on approximately 360 000 farm units, essentially run by individual families, with a number of these farms having scaled up their size and operations in response to growing internal and external market opportunities. Most farms, however, tend to be relatively small, with their production orientated by subsistence requirements and occasional commercial offtake, often practicing mixed crop-livestock farming as well as transhumant management of their animals (from spring/autumn pastures to summer and winter pastures).

² Economist Intelligent Unit's (EIU) forecasts, EIU Kyrgyzstan Country Report, July 2016.

Rural development and social context

5. **Rural Poverty.** As a result of broad post-independence economic reforms, poverty in Kyrgyzstan declined significantly and rapidly during 2000–2009, from 52% of the population in 2000 to 32% in 2009. The UNDP Human Development Index (2014) for Kyrgyzstan is 0.655, ranking it in 120th place out of 188 countries. Poverty headcount ratio at national poverty lines was 30.6% in 2014 (32.6% for rural areas, 26.9% for urban areas), and the poverty gap was 5.4%. In 2012, 20% of the population subsisted on less than USD 3.10 per day. Poverty is more prevalent and most severe in rural and mountainous regions.

6. The World Food Program (WFP) Emergency Food Security Assessment of March 2012 estimated that 18% of households were food insecure, of which 3% were severely food insecure and 15% were moderately food insecure. In addition, nearly 20% of food secure households used negative coping strategies for accessing food such as eating less preferred food to ensure their health and nutritional status of vulnerable members. The households in rural areas often used coping strategies, which jeopardize their livelihood sources, such as consumption of seed stocks, decreased expenditures for agricultural inputs and sale of livestock. This indicates that these households could be at-risk of becoming food-insecure in the event of further shocks (e.g. prices increases). Food insecurity was more prevalent in rural areas. In 2012, 24% of rural households were food insecure (5% severely and 22% moderately food insecure) while 9% of urban households were food insecure (1% severely and 8% moderate).

7. **Gender.** While the legal framework provides women equal rights to use and ownership of land, women have constraints in exercising the rights due to the traditional notion that it is men who head the households and in whose names the land is usually registered. A 2011 country assessment of access to land found that the formal law in Kyrgyzstan ‘has not in most cases been successful in protecting and improving women’s rights, including rights to access and own land’³. The Gender Development Index (GDI), a ratio of the female to the male HDI, is 0.961 for Kyrgyzstan, indicating that a gap still exists in human development between women and men. The Government, in its Sustainable Development Programme for 2013-2017, recognizes the challenges that Kyrgyz women are facing, including limited access to economic opportunities, prevalence of female workforce in the informal, high-risk labour market, and violence against women⁴. In 2012 the Government adopted the National Strategy for Gender Equality by 2020 and National Action Plan for Achieving Gender Equality for 2012-2014.

8. **Livestock Farming.** Livestock are important source of income and food for rural families. Almost all farming households, including landless ones, own livestock. Livestock products represent a substantial part of the diet and as much as 20 percent of total food consumption in kilocalorie (Kcal)/per capita. In 2014, the livestock industry accounted for 5.8 million sheep and goats, 1.5 million cattle (including yaks), and 0.4 million horses. More than 90 percent of the livestock are owned by small-scale farmers. In 2011, some 76% of rural households and 18% of urban households owned livestock. For those who owned livestock, the number of livestock was quite similar between rural and urban households: on average two head of cattle, 8-9 small ruminants (sheep and goat), and eight poultry.⁵ Severely food-insecure households continued to be less likely to own livestock while moderately food-secure households were more likely to own livestock than food-secure households: 42%, 65% and 50% respectively. The recently conducted LMDP I baseline survey found similar results: 87% of the cattle owning households have up to 5 heads of cattle. Among sheep owners, over 72% have up to 20 heads⁶. The same survey found that family income and poverty status is related to the number of animals owned.

³ USAID, *Property Rights and Resource Governance: Kyrgyzstan*, 2011.

⁴ The Government of Kyrgyzstan, *The Kyrgyz Republic Sustainable Development Program 2013-2017*, 2013

⁵ WFP Emergency Food Security Assessment of March 2012

⁶ Rural Development Fund, *Livestock and Market Development Project: Baseline Survey Report*, prepared for the Agricultural Projects Implementation Unit under the Ministry of Agriculture and Melioration, 2014. The sample comprised 510 households randomly selected in 30 villages in Issyk-Kul, Naryn and Jalal-Abad provinces.

9. Generally speaking, a family owning less than 3 cows and 10 sheep, or about 5 Livestock Units (LU), is likely to be considered 'poor' although such perceptions are subject to local variations and the family's access to other income sources, such as sale of crops and remittances.

10. **Agricultural household income.** Agriculture accounts in fact for just about a quarter of rural households' income (Table 1). This suggests that, for many livestock owners, the non-farm opportunities are more important than the on-farm ones⁷. These numbers also indicate that rural households are rather subsistence-oriented.

Table 1: Source of monetary income of an average rural household

SOURCE OF INCOME	2010		2014	
	KGS	%	KGS	%
Labour activities	1.257,7	53%	1.974,8	52%
Social packages	316,0	13%	611,2	16%
From own land plot	636,0	27%	1.063,1	28%
Other sources	176,0	7%	168,6	4%
Total income	2.385,7	100%	3.817,7	100%

Source: National Statistical Committee of the Kyrgyz Republic

Country competitiveness

11. **Livestock sub-sector.** Between 2009 and 2014 the number of heads of cattle, horses and sheep increased by 14 percent, 16 percent and 27 percent respectively,⁸ indicating a growing pressure on pasture reserves. At the same time, dilapidated infrastructure has inhibited use of distant summer pastures leading to over-grazing of village/nearby pastures. This situation, together with insufficient quality feed in the winter and early spring, has resulted in low livestock productivity. The new Pasture Law and improved pasture management by Pasture User's Unions are expected to reverse this trend.

12. Between 2008 and 2013, the production of cattle milk and meat increased by 12 percent and 6 percent respectively.⁹ The World Bank estimates that milk production could potentially increase by 70 percent and mutton and beef by 50 percent. However, commercialization rates of animal products remain low: 64 percent for live animals at slaughter age, 52 percent for milk, and 34 percent for wool¹⁰. These figures underpin the statement that livestock production is largely a subsistence form of agriculture.

13. With its favourable and highly diverse resource base the agriculture sector has the potential to achieve much stronger and more broadly based growth. A wider range of commodities could be competitive on the EAEU and other markets, and more producers and agro-processors could be selling into these markets. The sector also benefits from Kyrgyzstan's favorable location and well-developed links with the Central Asian and Middle Eastern countries and long-standing relations with Japan.

14. A poor animal health situation and the lack of effective veterinary services are the two largest overriding limitations of further development of livestock primary production. Diseases and parasites negatively impact animal productivity and human health. In addition, the presence of animal diseases causes great economic losses to the rural poor representing a large group of the region's livestock owners, and strongly affects their ability to trade on national and regional markets. Most of the currently reported food safety problems are directly related to animal diseases such as brucellosis and echinococcosis.

⁷ The standard of living of the population of the Kyrgyz Republic. 2015, National Statistical Committee of the Kyrgyz Republic

⁸ FAOSTAT.

⁹ FAOSTAT.

¹⁰ The Kyrgyz Agrarian University named after Scriabin. Agriculture in Kyrgyzstan: current state, challenges and development options, 2008.

15. The recent accession to the EAEU has increased the opportunities for both agricultural exports and imports. Liquid cow milk and dairy products occupy 82 percent of the export structure (in monetary terms). The Union, and Kazakhstan in particular, has become Kyrgyzstan's major trading partner for agrifood. However, all livestock sub-sectors, notably live animals; meat & edible offal; fish & crustaceans; dairy eggs & honey; other products of animal origin) suffer from decline in sales on external markets. In the same time the import of meat and meat products and live animals grew significantly in 2010-2014.¹¹ The ability to compete on the regional market is hindered by the lack of compliance with the EAEU technical regulation and phytosanitary and veterinary measures¹².

16. While the national food industry is featuring healthy growth (+25 percent for meat processing, +14 percent for dairy¹³), rural households do not seem to benefit from this positive trend, which indicates little inclusiveness and distorted governance of the current setup of supply. Farmers, especially the dairy farmers, are price-takers. The governance of livestock value chains, especially of the dairy chain, is currently centered in the hands of middlemen.

17. **Rural Finance.** In terms of physical infrastructure for financial services delivery, Kyrgyzstan is far behind more developed countries. For example, according to the International Monetary Fund (IMF) Financial Access Survey,¹⁴ in 2014 there were 7.83 bank branches in the country per 100,000 adults. Generally, Kyrgyzstan is characterized by low levels of financial service usage. For example, account ownership¹⁵ in the country is 18.5 percent of adults as compared to 51.4 percent in Eastern Europe and Central Asia (ECA)

18. However, in the area of credit usage the country is ahead of its peers – 13.5 percent of adults used credit in the past year while this figure was 12.4 percent for ECA and 7.5 percent for lower middle-income countries. Credit usage is even higher among rural residents (14.3 percent) and the poorest 40 percent of the population (14.4 percent).

19. There has been a substantial increase in the amount of credit (by banks and microfinance organizations) directed to the agricultural sector. While in 2004, commercial banks only provided KGS 113 million to agricultural enterprises, this increased in 2010 to KGS 3,350 million. Similar figures hold for credit provided by nonfinancial institutions (micro-finance): it increased from KGS 348 million in 2004 to KGS 5,000 million in 2010. However, the amount of credit provided remains low compared to its share in GDP or employment. The most common type of credit in the agricultural sector is credit provided by non-financial institutions (61% of all credit directed to the agricultural sector). Livestock farmers do not borrow to invest on-farm. Instead, they use loans to finance their production costs like animal drugs, frozen semen for artificial insemination, purchase of calves for fattening. These expenditures represent about 70 percent of loans¹⁶.

20. **Climate change.** The Second National Communication of the Kyrgyz Republic on the UNCCCF outlined future climate projections for the country. The general trend indicates that the mean temperatures will continue to rise and the level of precipitation will fall. Specifically, grassland productivity will decline in the semi-arid and arid regions of Asia by as much as 40 - 90% due to an increase in temperature of 2 - 3°C This will result in greater aridity and variability with the increased probability of extreme events such as droughts and frosts. Climate change (temperatures, precipitation, variability, etc.) will affect the livestock sector with respect to animal health, nutrition and availability of fodder. For instance, rising temperatures, the frequency and severity of events may result in heat stress in animals which in turn will lead to lower productivity. The indirect effects include

¹¹ The import of meat and meat products – particularly of poultry meat and that of frozen beef to some extent – grew by 77 percent and the import of live animals grew more than 3-fold from 2010-2014.

¹² Ministry of Agriculture, Russian Federation Federal Service for Veterinary and Phytosanitary Supervision, Provisional report on the Eurasian Economic Union inspection experts of the animal origin production enterprises and products of the Kyrgyz Republic, Moscow, 2015

¹³ Growth in output. Source: National Statistical Committee of the Kyrgyz Republic

¹⁴ www.data.imf.org

¹⁵ The account penetration level is the indicator commonly used to assess the number of the "banked" people in a country and the level of financial inclusion.

¹⁶ From the study looking at financial needs of value chains participants, 2015, GIZ.

reduced pasture productivity and increased exposure to new pests, invasive plants and diseases. Projected climate changes will affect water availability and thus the availability of fodder, especially in rain-fed areas.

21. The agricultural sector, including the livestock sub-sector, will need to develop measures to address issues of adverse climate change impact such as: (a) use of efficient irrigation systems (e.g. drip irrigation); (b) introduction of drought (frost) resistant varieties of crops and species of livestock; (c) changes in cropping patterns to take advantage of prolonged growing period; (d) soil conservation practices (e.g. minimum/zero tillage); and (e) improved pasture management, including pasture rotation and rehabilitation.

Government strategy and priorities

22. The overall framework for development in Kyrgyzstan is guided by the National Sustainable Development Strategy 2013-2017 (NSDS). The overall goals of the NSDS are the establishment of a state governed by the rule of law, ensuring unity of the nation as a prerequisite for preserving statehood, and the resolution of social issues and challenges. This is to be obtained through sustainable economic development and macroeconomic stability, improved business environment and investment climate, development of strategic industries, and equitable development of the regions of the country. Specifically for the agricultural sector the NSDS aims at: (i) increasing production and quality of agricultural products; (ii) increasing crop and livestock yields; (iii) extension of irrigation systems and optimization of water use; (iv) development of the land market; (v) cooperative development; and (vi) increasing access of the rural producers to financial resources, crediting and leasing. In agro-processing the key strategic areas are: (i) increasing export orientation; (ii) increasing import substitution/protection of the local producers; (iii) increasing the competitiveness of goods; (iv) stimulating increased processing of domestic raw materials to increase value added; (v) improving the investment climate to attract investment; (vi) training all levels of personnel for the industry.

IFAD Country Programme

23. The IFAD programme in Kyrgyzstan was initiated in 1996 and consisted in its first fifteen years mainly in co-financing of World Bank initiated agricultural development projects. The latest of these was the Agricultural Investments and Services Project (AISP), which supported the important pasture reforms introduced by the Pasture Law of 2009, and the pursuit of improved animal health through the national animal disease control strategies. The first IFAD initiated project in Kyrgyzstan, the Livestock and Market Development Programme (LMDP) was approved by the Executive Board in December 2012 and was declared effective on 17 June 2013. The development objective of the Programme is to increase livestock productivity in Kyrgyzstan, specifically in Issyk-Kul and Naryn Oblasts. The programme is conceived as a follow-on to the AISP and has three expected outcomes: (i) More productive and accessible pasture areas and increased supplementary feed available to community livestock; (ii) Healthier livestock with lower levels of mortality; and (iii) Market partnerships in the milk value chain providing incentives for productivity increases. The Programme was in 2014 extended to the three additional Oblasts of Batken, Osh and Jalal-abad (LMDP-II) and now covers five of the seven oblasts of the country. ASAP funding has ensured the mainstreaming of measures specifically aimed at enhancing the climate resilience of pastoral communities. The interventions have been designed in close consultation with the World Bank that in 2014 started the Pasture and Livestock Management Improvement Project, which has objectives and activities similar to those of LMDP I+II and covers the two remaining oblasts of the country. The three projects now constitute a coherent programme with national coverage, implemented by the MoAM.

24. The country programme and its interventions have been designed on the basis of the following strategic considerations agreed with the GoK: the focus of the programme should be the livestock sector, as such a focus would support GoK's aim of developing this backbone of the rural economy for improved food security, nutrition and incomes, and at the same time be in line with IFAD's mandate, as livestock is the basis for the livelihood of the poorest segments of the rural population who have little or no access to scarce and expensive arable land. Within the livestock sub-sector the initial focus

should be on the two pillars of productivity enhancement: a rational and efficient use of the country's pasture resources through support to the roll-out of the community based management regime introduced by the new pasture law; and improved animal health, nutrition and husbandry through support to the implementation of the national animal disease control strategies and the establishment of a private veterinary service. Once these fundamental issues were being addressed, the focus of the programme should gradually shift to the commercial aspects of the sector, in particular the market access and market integration of primary producers in order for them to transform increased production into increased incomes, as well as to ensure full impact on food security and nutrition beyond the local level.

B. Rationale

Project justification and rationale

25. Although livestock production contributes heavily to rural livelihoods, nutrition and food security, and to total agricultural sector output growth and exports, productivity is low and far below its potential. The main constraints that need to be addressed are inadequate animal feeding due to poor utilization of pasture resources, poor animal health, inappropriate farm management practices, and weak livestock marketing and processing. Investment in measures to overcome these constraints have an immediate impact on smallholders' income and rural livelihoods in general, and contribute to agriculture performing its critical role in overall economic development. While the on-going IFAD programme is already addressing the three first obstacles, there is an increasing urgency of also addressing the obstacles to livestock marketing and processing in order to take a comprehensive and effective approach to developing the sector. IFAD is well positioned to support the livestock sector in addressing this latter constraint thanks to the lessons learnt from previous and on-going interventions, and the effective partnership established with government entities, NGOs, rural communities and other donors, primarily the World Bank, GIZ and EBRD.

26. The Kyrgyz Republic has **high potential** to broaden and strengthen its livestock sector thanks to a wealth of alpine pastures and a unique biodiversity of plants and animals. There is a strong demand on the domestic and regional markets for hard and semi-hard cheeses produced in Kyrgyzstan because of the good protein content in raw milk and its unique organoleptic qualities thanks to the extensive production by the grazing herds. A growing tourism industry is also an important buyer of felt handicraft items, mostly manufactured from fine merino wool. Kyrgyzstan has good potential to supply high quality organic beef, yak meat, yak down and wool, merino wool, soft leather, especially that made of yak skins, mare's and goat dairy, high value apiculture products (e.g. royal jelly) and much more¹⁷.

27. In August 2015 the Kyrgyz Republic signed accession papers to join the Eurasian Economic Union (EAEU). By joining this regional trading union the country's food safety system needs to meet international standards¹⁸, and also the country agrees to be inspected by trading partners. The EAEU's veterinary inspection in February 2015 resulted in a report elaborating a multitude of deficiencies in the national veterinary control and food safety system. Thus the Kyrgyz Republic now has an urgent need to rectify these deficiencies in its general food safety system and the livestock standards in particular before trade can be fully allowed among EAEU partners.

28. Accession to the EAEU has exposed the sector to much higher levels of both domestic and regional markets, raising questions as to its ability to compete also meaning to comply with the technical regulation of the Union. Discussions with sector stakeholders¹⁹ suggest that while primary agriculture and agribusiness exhibit high comparative advantage of Kyrgyz dairy and red meat industries most farmers and processors are struggling to maintain their export position in the region.

¹⁷ End Markets Assessment Study, February 2016.

¹⁸ The Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization; Codex Alimentarius; OIE standards

¹⁹ End Markets Assessment Study, February 2016, and detailed/final design mission's field visits in March and June 2016.

29. Over 95 percent of raw milk and 99 percent of animals for meat production are sourced by agro-industries from small- and medium-scale farmers. The principal constraints the farmers are facing: (a) lack of access to winter feed, poor quality of forage and feed; (b) difficulties in the preservation and transportation of livestock products (meat, milk) to processing units and markets; (c) insufficient access to veterinary services and breed improvement techniques (e.g., artificial insemination); and (d) lack of training/extension services, affordable financial resources and entrepreneurial capacity to increase productivity and efficiency.

30. There is a clear need to improve the products aggregation function within the livestock value chains (including cold chain infrastructure) in order to support processing expansion, while allowing smallholders to be part of — and benefit from it. Partnering with agro-processors is thus imperative, aiming at: setting quality standards for raw products, ensuring quality control and delivery mechanisms, and achieving a better managed seasonality of supply. Accordingly, the establishment of aggregation points will entail various positive externalities to the value chain development, in general, but primarily and directly to the benefit of smallholder farmers living in the vicinity of agro-processing units. These points also constitute a suitable convergence entry for diverse and complementary technical support, advisory interventions and input supply.

Summary of Project Scope

31. Based on the foundation created by LMDP I and II, the proposed **Access to Markets Project (ATMP)** is expected to further strengthen the support provided to the livestock sector of Kyrgyzstan. The ATMP seeks to address the sector constraints by: (a) facilitating access to modern production and processing technologies, best practices, capacity building through training and on-farm demonstrations, and an integrated support along selected livestock value chains with development potential and comparative advantage at local, regional and international levels; (b) support to the formulation of bankable investment projects proposals for production and processing enterprises development, while due attention will be paid to the specific needs of rural women and youth as enterprising agents; (c) the provision of sector and user-beneficiary tailored financing; and (d) institutional strengthening: targeted support to the governmental agencies and applied research institutes tailored to specific needs of the identified value chains; and the establishment of a platform for public-private-producers partnerships development.

II. Project description

A. Project area and target group

32. The Project has a national coverage and adopts a demand-driven approach. ATMP's primary target are smallholder livestock farmers who participate in and benefit from improved value chains. They comprise: (i) poor livestock farmers (those who typically own up to 2-3 cattle and 8-10 sheep/goats, i.e. up to 5 LUs); (ii) female members of livestock owning households, including female heads; and (iii) other smallholder livestock farmers. The poor livestock farmers (the first category) are most likely Social Passport holders. The other beneficiary groups consist of: (iv) agribusinesses (agro-processors, aggregators/wholesale traders and modern food retail formats); (v) input suppliers and service providers; (vi) private vets; (vii) national scientific and academic institute staff; and (viii) the rural unemployed. For the latter, the Project support is expected to create greater decent employment opportunities in relation to on-farm and processing activities of targeted value chains. Particular attention will be given to the participation of rural women and youth, individually and in groups, as producers and as processing and market entrepreneurs.

33. The ATMP will work with selected value chains and provide holistic and coordinated support to different actors in a way that will improve the chains' overall performance and outputs²⁰. The Project will invite champions in the pre-selected value chains who are willing to launch or deepen sound business models under productive partnerships with producers and other actors in the chains.

²⁰ See the summary of the Rapid End Markets Assessment for Livestock Products in Appendix 4, Annex 4.

Smallholder livestock producers, who are the Project's primary target group, will be represented in each selected value chain and expected to improve their income opportunities through better integration with the market. ATMP's targeting strategy will incorporate the following principles: all stakeholders understand the pro-smallholder nature of the value chain development; selection of value chains and Leading Entities (LEs) will take into consideration positive impacts on the small producers' income and livelihood; PUUs, facilitated by ARIS and building on the positive experience of the LMDPs I and II, will play an active role in identifying and mobilizing the target groups at the community level in a transparent and participatory manner, and ensure to avoid elite capture of the Project opportunities and benefits.

B. Development objective and impact indicators

Project development goal/ objective

34. The ATMP **Goal** is to contribute to increased incomes and enhanced economic growth in pastoralist communities. The **Development Objective** of the Project is improved access and integration of smallholder livestock farmers with remunerative markets for their products, leading to improved and equitable returns.

Impact indicators

35. Project implementation will be guided by the project's results management framework. Key performance indicators at Goal level are: (i) 28,000 rural households in the Project area increase their index of household assets ownership by 10% (disaggregated by gender, poverty, farm type and youth categories); and (ii) At least 10% reduction in the prevalence of child malnutrition, as compared to baseline²¹. Key performance indicators at the development objective level are: (i) The value of livestock products sold by targeted farmers in the Project area increased by 30%; and (ii) 2,800 decent jobs created (40% women) through livestock-related farm work/ processing-unit expansion and new rural enterprises.

C. Components/Outcomes

36. The Project's investments and activities will be executed through three components in addition to Project Management: **Component 1.** Livestock Value Chains Development; **Component 2.** Livestock Value Chains Financing; and **Component 3.** Upgrading the Kyrgyz Livestock Sanitary System.

Component 1: Livestock Value Chains Development

37. This Component, the outcome of which will be "*capacity for sustainable, efficient livestock production, processing and marketing enhanced*" will support efficient linkages and partnerships amongst livestock value chain actors, improved access to modern technology and Good Agricultural Practices with a specific focus on cold chain management and traceability.

38. **Subcomponent 1.1. Capacity Building of Livestock Value Chain Stakeholders.** The activities under this Subcomponent will entail demand-driven capacity building and advisory services for the participants of pre-selected value chains driven by the Leading Entities (LE). More specifically, through information campaigns the Project will invite all interested value chain stakeholders to apply for the role of a LE. See Appendix 4, Annex 2 for a flowchart of the decision process. The eligible entities will be asked to submit short proposals to be assessed by the APIU against Project set criteria. Entities that are the subject of bankruptcy, criminal investigation, fraud, corruption or are in default of contractual agreements would be ineligible to participate.

39. Building on the results of the two earlier IFAD projects in the country, the Project will mobilize producers and their groups through suitable PUUs with support from ARIS. Suitability of a PUU is determined by primarily its willingness to collaborate with agribusinesses, strong leadership and

²¹ Results and impact management system-RIMS anchor indicator

stable power supply (in case of dairy chain) The Project will also adapt the experience gained under the Livestock and Markets Development Project's Component 3: Diversification and market/value initiatives.

40. ARIS will assist in guiding the producers groups in their development and create incentives for them to adopt best practices for cooperation. Like in the LMDP, the Project will, through ARIS, conduct awareness and training campaigns so that PC/PUU members in the selected areas (where the selected VC is located) understand the benefits of working together for aggregation and joint marketing of their products.

41. Once ARIS has identified the LEs based on the initial eligibility criteria (see above), all the suppliers of live animals and raw material as well as service providers will be gathered to present the concept of a productive partnership, its modalities and benefits to farmers and other value chain participants. It is expected that at this point potential partnerships would be identified and the above business proposals would be developed.

42. Selected proposals will be further elaborated by a dedicated business advisory facility established between the Project and the EBRD's Small Business Support (SBS) unit. The facility would assist LEs and associated value chain participants to prepare bankable investment proposals for their value chain development or Value Chain Development Business Plans (VCDBPs). The VCDBP analysis would include: (i) a situation analysis including a detailed assessment of expected smallholder inclusion; (ii) upgrade options; (iii) constraints to upgrading; and (iv) organizational setup. The VCDBPs will incorporate all envisaged activities within the value chain, including associated capacity building and mentorship. The VCDBPs will list each type of investments eligible for financing under the ATMP earmarking Grant Projects (GP) and Credit Projects (CP), all accompanied with a realistic business model and a thorough financial analysis. The VCDBPs will be evaluated by the Selection Panel (see para 66) against a set of criteria including smallholders' inclusion (number and profit distribution-wise), gender and youth considerations, food safety enhancement, diversification, climate change mitigation, etc. Following this evaluation of VCDBPs, eligible proposals might be subject to grant financing by the ATMP or submitted to the Participating Financial Institutions (PFIs) that meet IFAD due diligence requirements (further details under Component 2). Sequencing of VCDBPs' implementation will be based on a first come - first serve principle.

43. Associated value chain capacity building activities, e.g. training of farmers or agribusiness staff/management, organizing farmers into groups, etc., would be financed directly by the ATMP. The development of a VCDBP would not be a guarantee of ATMP financing. VCDBPs would be ranked by the APIU against key Project indicators and only those VCDBPs meeting minimum ATMP requirements would be used as a framework for preparation of individual Grant Projects or/and Credit Projects to be further presented to Selection Panel for GPs or/and forwarded to PFIs for consideration of CPs. The Selection Panel will be validating the recommendations of the APIU for GPs financing, while it is solely PFIs' decision whether or not to finance all or part of the CP private good investment. APIU's recommendations for GPs financing will be based upon assessments made against key Project criteria and in accordance with the PIM. Grants to smallholders should be allocated only if those have sellable surplus. The sequence of training products – grants – mentoring should be carefully followed and coordinated according to the VCDBP.

44. The Subcomponent will provide capacity building through training and on-farm demonstrations, piloting of innovative and climate-smart technologies, targeted advisory services and exposure to the best international practices through the participation in study tours and trade fairs. Activities will be targeted at:

- *Smallholder/peasant farmers and their groups* on animal health, good farming practices including feeding, on-farm management with focus on planning, hygiene standards for raw material handling, financial literacy, business planning and management of collection centers and other forms of product aggregation for the improved market access and fair margin distribution upstream the value chain;

- *Private veterinaries and zoo-technicians on knowledge upgrade for animal health and biosecurity, new drugs, animal nutrition and artificial insemination;*
- *Aggregators on food safety and quality control;*
- *Agribusinesses on business planning, quality/supply chain management, international food industry standards (ISO 22000 series, HACCP), preparation of company's testing laboratories for certification (ISO 17025), market prospecting for niche products;*
- *Marketing Business Clinic for Local Entrepreneurs for women residing in rural areas and regional cities;*
- *Unemployed youth in rural areas on vocational training, apprenticeship, and other capacity building supports, which will aim at equipping them with the skills potentially required by the upgraded livestock value chains (e.g. yak wool quality controllers, etc.).*

45. **ARIS Facilitation.** The facilitation will comprise the recruitment, deployment and operation of the ARIS teams in the area where the producers of live animals / raw material supplying LEs are located to facilitate the mobilization process, understanding of the productive partnerships concept by farmers and their groups, build capacity to work under formal arrangements (including mentoring) and administer the associated grants. The Project provides financing to enable ARIS to carry out the various processes required to implement the range of activities largely at the PC/PUU level. The required services to be provided by ARIS will be specified in a result-based agreement.

46. **A Selection Panel** will be established by the APIU and composed by a minimum 7 but maximum 11 members, mainly from the private sector: representatives from the professional unions like Dairy Union, Meat Union, EBRD's SBS, Kyrgyz Veterinary Association (KVA), Republican Association of Pasture Users' Unions (RAPUU), ARIS, MoAM and possibly others. Meetings of the Selection Panel will be held as needed, but likely quarterly when a reasonable number of Grant Projects is accumulated (not less than 10). The Value Chain Development Coordinator (VCD Coordinator) recruited by the APIU will be acting as Secretary of these meetings and will be taking a lead responsibility for assessment of the GPs according to the procedures described in the Project Implementation Manual (PIM). The VCD Coordinator will be supported by short-term international and national consultants (specialized reviewers and advisers). The Selection Panel's main role will be to validate the selection process of GPs against the PIM. The Project will cover costs for conducting the meetings of the Selection Panel. A description of the VCDBP process is contained in Appendix 4, Annex 2. Appendix 4, Annex 1 contains TOR for the key staff, consultants and service providers.

47. Further, this Subcomponent will support the development of innovative, demand-driven livestock production and processing and food safety technologies through participatory on-farm/factory applied research and technology demonstration, delivered by national academic/research institutions, private companies or NGOs. Based on the Platform's priority needs identification process (see further in Subcomponent 1.3), the APIU will establish a competitive applied research support programme to identify bottlenecks in the country's livestock value chain development and environmental sustainability. The Project would fund, inter alia, participating institutions' operational costs and field and laboratory equipment requirements, national and international TA, on-farm/enterprise technology testing and demonstration, farmer and scientist capacity building and experiential study tours and, where appropriate, scholarships for post-graduate student coordinators of participatory technology testing and demonstration activities. Technology testing and innovation needs would be identified annually over the first three project years. Depending on the identified needs, technology testing and innovation programme agreements could be awarded for up to US\$100,000 and to 2 years' duration.

48. Once technology needs have been identified and prioritised by Platform members, the APIU will prepare an invitation for public and private technical specialists, faculties and institutions to submit brief pro-forma-based proposals for their implementation. These will be evaluated by a panel of independent experts and APIU staff and international/national advisers against a set of criteria that will include: (ii) an assessment of the applicants understanding of the constraint and capacity to address

it; (ii) the extent of smallholder farmer and private enterprise engagement in the development of solutions; (iii) the level of engagement of post-graduate students; (iv) the likely financial benefit of the proposed solution(s); and (v) the expected environmental impact and any associated mitigation measures (further elaborated in the PIM). Successful applicants will then be invited to submit a detailed proposal, which will be negotiated with the APIU and form the basis of a contractual agreement. Payments for the delivery of technology innovation programmes will be based on a set of agreed, time-based output-based milestones that will be identified in the contract. All final research reports will be peer reviewed by national and regional specialists and final payments will only be made on the receipt of a satisfactory review.

49. **Subcomponent 1.2: Product Aggregation Enhancement.** This Subcomponent aims to address the issue of insufficient cold chain infrastructure for raw products collection and their quality and safety control. The identified under Subcomponent 1.1 eligible GP investment packages will be co-financed as follows:

- *to Leading Entities* – up to US\$100,000 on a 50% basis (i.e. up to US\$50,000 as a grant per investment package) - for the financing of collection and cooling centers, raw material testing equipment, small milk tanks and churns for collection, small refrigerating trucks, access infrastructure;
- *to groups of supplying farmers* – up to US\$100,000 on a 80% basis (i.e. up to US\$80,000 as a grant per investment package) - for the financing of portable milking equipment, feed choppers and mixers, new feed crops varieties, animal sheds renovation, improved breeds, access infrastructure;
- *to private veterinaries and zoo-technicians* – up to US\$20,000 on 50% basis (i.e. up to US\$10,000 as a grant per investment package) - serving the selected value chains for the purchase of veterinary drugs/instruments and artificial insemination equipment.

50. The grants to beneficiaries would be channelled through ARIS in line with the respective VCDBPs. The beneficiaries would be expected to commit to the implementation and the achievement of the targets by signed agreements, which would envisage a phased financing of the grants against the clearly identifiable milestone indicators. Beneficiaries/groups would be responsible for managing the grants, while ARIS would administer the provision of grants based on its well-established modalities and procedures also applied in the LMDP but to be adjusted for the ATMP and described in the PIM. The project will have the same key implementing agencies as the two on-going projects LMDP I and II, as well as clear targeting and selection mechanisms. All project activities (mobilization, information campaigns, etc.) and assistance (grants, sub-grants, training, etc.) within the ongoing projects are recorded (by maintaining records of grant recipients, records of training participants etc.) which will allow the ATMP to avoid duplication and at the same time to fill gaps and meet emerging needs of the beneficiaries.

51. **Sub-component 1.3. Platform for Public-Private-Producers Partnerships Development and Knowledge Management.** The Project will host a platform for the exchange among value chain actors for better and innovative integration of market demand into production models. These could include, *inter alia*, premium goat cheese or yak meat cuts for upmarket restaurants of the capital city, fine yak and merino wool for women-driven fiber processing units. While the Platform will provide an opportunity for all value chain actors to share their experiences and concerns, it will also allow and create a space for a constructive dialogue between buyers and producers on product quality specifications and supply frequency needs.

52. A contracted service provider will, through a series of periodic meetings, progressively enable stakeholders to: (i) identify, discuss and assess the livestock sector's constraints, priorities and build upon opportunities for investments; (ii) become conversant with "Public-Private-Producers Partnerships" business models; and (iii) jointly with the professional unions, develop value chain business and investment strategies. The organization of the regular thematic events and master

classes at the national level on livestock industry development issues is envisaged. Progressively, the Platform will engage the decision-makers at local, regional and national levels with the aim of increasing their understanding of livestock development issues and supporting the development of a conducive regulatory and incentive framework for business development. The service provider will advise on a constitution and by-laws leading to the election of a Platform Coordination Committee, which will meet regularly to oversee the work of the Platform and its contracted service providers. The elected Coordinating Committee will elect its Chairperson. The APIU IFAD projects' Manager, VCD Coordinator, Rural Finance Coordinator and Veterinary Coordinator will be ex-officio members of this Coordination Committee. The APIU IFAD projects' Manager will be the Secretary for the Platform Coordination Committee and prepare brief minutes of all meetings.

53. It is expected that toward the end of the Project, the role of the Platform's facilitator will shift from the contracted service provider to local institutions to ensure the sustainability of the consultative and learning process. A possibility to shift this role to the Business Association JIA will be further investigated. The Project will also ensure that the linkage between the Platform and the Project M&E/KM functions for the sharing of data, knowledge and lessons learnt will be established.

Component 2: Livestock Value Chains Financing

54. The outcome this Component will be "*efficiency and profitability along targeted smallholder-inclusive livestock value chains increased*", to enable livestock value chain actors to increase their investment in profitable livestock value chains through the provision of grants (under Component 1) and by linking them with external credit lines. In addition, the Component activities will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers. The outcome will be measured by the following indicators: (i) Portfolio at risk below 10%²²; and (ii) Commercial processors in the Project area increase purchase of livestock and livestock produce supplied by smallholders by 30%.

55. **Subcomponent 2.1. Access to External Credit Lines.** No IFAD-funded credit lines will be provided as the needs of micro and small rural entrepreneurs and smallholder farmers are currently sufficiently met by the private sector.

56. The Project will partner with existing financial institutions/projects targeting agricultural development to link them with the agricultural producers and processors identified and assisted through Component 1. These partners may include (but are not limited to):

- a) KfW, European Investment Bank and the Swiss Development Cooperation's project that will include a credit line to commercial banks to fund agriculture;
- b) The Kyrgyz-Russian Development Fund with a capital of USD 500 million that can be used for any economic sector including agriculture.

57. The Project will sign a MOU with each of the partners – Financial Service Providers (FSPs) - outlining the eligibility criteria for prospective borrowers, which will be harmonized between the ATMP and the partners, as well as specific arrangements designed to link the Component 1 beneficiaries to the partner institutions.

58. **Subcomponent 2.2 Innovative Financial Products.** The Project will partner with those financial service providers interested in the development of innovative financial products and solutions for agriculture, and committed to piloting these products and documenting lessons learnt. An amount of USD 0.7 million will be allocated for this purpose to cover the costs of product development experts, possibly any necessary technological equipment, training of interested financial institutions, and the documentation and dissemination of lessons learnt.

59. These products can include (but are not limited to):

²² RIMS 1st level indicator

- Warehouse *receipts* finance that can allow smallholders to use the stored produce as collateral with which to access credit from financial institutions and allows them to smooth consumption as they search for the best market or wait until prices rise;²³
- Using *digital tools* to improve access to finance within value chains. These include (i) targeted digitization of relationships between producers and buyers within existing value chains, (ii) the digitization of broader relationships – both financial and non-financial – between actors within existing value chains (e.g. relationships between producers, buyers, input suppliers, and financial service providers), and (iii) efforts to use digital tools to ease excluded smallholders into value chains (e.g. technologies that help smallholders to improve the quality and reliability of their production, facilitate connections with buyers, and leverage these connections to improve access to a broader suite of financial services).²⁴

Component 3: Upgrading the Kyrgyz Livestock Sanitary System

60. The objective of Component 3 is to strengthen both key public and private sector arms of the Kyrgyz Veterinary Authority, which facilitate livestock commodity trade and safe food. The expected outcome of Component 3 will be “*the upgraded Kyrgyz livestock sanitary system*”, which would be measured by a 10% increase in official export of live animals and livestock products.

61. **Subcomponent 3.1 Strengthening the State Veterinary Sanitary System.** The State Inspectorate for Veterinary and Phytosanitary Security (SIVPSS) needs to demonstrate its equivalency with sanitary standards of trading partners in the EAEU. To facilitate this, the Project will invest in upgrading selected public vet service ‘critical competencies’ as defined by the OIE in order to meet international standards. Significant investment will focus on upgrading skills and competence of the SIVPSS staff, upgrading and equipping two regional laboratories to international standards; supporting the government for animal identification in selected value chains; and refurbishing some border posts.

62. The SIVPSS will continue making progress in controlling two priority infectious diseases, i.e. brucellosis and echinococcosis, where IFAD and the World Bank provided support under previous and ongoing programmes. The ATMP will support capacity building for strengthening 11 key critical competencies, which would allow the SIVPSS to move from Stage 1 to Stage 2 of the FAO-OIE Global Strategy for Control and Eradication of Peste des Petits Ruminants (FAO-OIE GSCE PPR). Particular focus will be on establishing an active disease surveillance system. In addition to investments in the key critical competencies, the Project will procure PPR vaccines during Stage 2 and will have the option of purchasing other vaccines should an infectious disease outbreak occur. An outbreak of a notifiable animal disease such as foot and mouth disease, PPR or sheep/goat pox is a high risk for the Project as trading partners would immediately ban trade of livestock products until the disease was sufficiently controlled. Therefore the procured vaccines will serve a dual purpose, to moderate Project risks in case of a disease outbreak and to initiate control of PPR disease in line with the FAO-OIE GSCE PPR. The Project proposes that sufficient vaccine is procured for the first two years of vaccination, and that small ruminant owners are covering some costs from the beginning to the full coverage by the end of the Project. The funds collected will ‘prime the pump’ or capitalize the major foreign currency cost of the third and fourth year’s vaccination campaign, i.e. Stage 3 or eradication stage. A similar approach has been applied for brucellosis vaccines and echinococcosis deworming medication for dogs under the ongoing LMPD.

63. Furthermore, the Project will make a provision for 3-4 national consultants for the SPS/Epidemiology Unit in the SIVPSS headquarters who will receive intensive training in the use of the SPS Agreement in negotiations with trading partners. The SIVPSS Director can rely on these knowledgeable consultants as he negotiates the equivalency of the upgraded Kyrgyz livestock

²³ A draft law on warehouse receipts is currently being discussed and planned for adoption in Kyrgyzstan. See:

<http://ub.kg/ru/sostoyalsya-kruglyi-stol-posvyashhennyi-voprosu-vnedreniya-skladskih-raspisok-v-kyrgyzskoj-respublike/>

²⁴ See: Digitizing Value Chain Finance: Archetypes, Emerging Models, and a Vision for Greater Scale. Focus Note, CGAP, forthcoming.

sanitary and food safety systems with trading partners. International technical assistance will guide members of this unit and others responsible in the SIVPSS to initiate effective active disease surveillance and reporting, become proficient in carrying out qualitative risk assessments, and in formulating epidemiology-based disease control strategies. This unit will ensure timely and transparent disease reporting to the OIE and provide current advice on the sanitary situation for the SIVPSS Director, the Minister of Agriculture and others.

64. Technical assistance will be provided to the SIVPSS for establishing an **Accredited Veterinarian system**. The Kyrgyz law and OIE standards allow private practice veterinarians to carry out specific regulatory tasks as delegated by the Veterinary Authority, which is the SIVPSS, and under its supervision. Even though this delegated authority is well recognized in international standards, it is questioned by the EAEU trading partners. Short course training, testing and certification for Accredited Veterinarians will help ensure that specific delegated regulatory tasks are carried out correctly, meet standards (equivalence) of trading partners and allow accountability through the Kyrgyz Veterinary Chamber.

65. The active disease surveillance system in Kyrgyzstan has been neglected over the years. Lack of an active surveillance system was noted as a deficiency by the EAEU inspection team and by the OIE Performance of Veterinary Services evaluation in 2007. Community-based private practice vets form the 'front line' of active surveillance and reporting of unusual disease occurrences. Reporting to district SIVPSS veterinarians is the entry point for this active surveillance system and reports from the field. In addition to establishing active disease surveillance and reporting, the ATMP will invest in district level field vehicles, annual maintenance and fuel for these vehicles, computers and Wi-Fi communication equipment. This upgraded active surveillance system is a cornerstone for rapid detection and suppression of diseases affecting livestock smallholders' vulnerability, international trade and also a necessary critical competency for moving from Stage 1 to Stage 2 of the GSCE PPR. Project support will be provided on a declining basis whereby the SIVPSS would be fully covering operational costs by the project completion.

66. **Animal identification support.** The SIVPSS is tasked with permanently identifying livestock in the country as a recommendation by the EAEU veterinary inspection team and as an international standard under the OIE Terrestrial Code. A functioning animal identification system will support the SIVPSS's argument for equivalency of the Kyrgyz veterinary sanitary system.

67. The FAO assisted the government in this field by designing an animal identification database, which is ready for field testing in 2016–2017 by the SIVPSS in three districts. The Project will support the government's animal identification system by following on from these pilot studies, and it will be limited to some selected dairy value chains and the sheep value chains in Naryn. Following the lessons learned and recommendations from the pilot studies, technical assistance for field staff, ear tags (estimated at 130,000 dairy cattle plus 50,000 offspring annually; and 60,000 ewes and 25,000 male offspring annually), contracts for field staff, supervising research institution and database maintenance contracts will be provided under the Project.

68. **Rehabilitation of regional veterinary diagnostic laboratories:** The Project will rehabilitate and reequip two regional veterinary diagnostic laboratories, in Talas and Batken oblasts, as part of the SIVPSS's strategy to demonstrate equivalency to trading partners. The Russian Federation intends to rehabilitate two central reference laboratories (Bishkek and Osh), while the WB plans to support the regional vet diagnostic laboratory in Issyk-Kul oblast through the Integrated Dairy Productivity Project. The two regional laboratories will carry out basic serology tests, using modern ELISA technology and conventional tests as needed, bacteriology and parasitology. Virology, toxicology and other speciality testing will be referred to the central reference laboratories. The ATMP will provide sufficient technical assistance for training in the use of new equipment, laboratory management, laboratory quality control, sample preparation and related issues. Sufficient glassware, furniture, chemicals, media and reagents will be provided to stock the two new labs.

69. The Kyrgyz vet diagnostic laboratory system will carry out a country-wide serosurvey for PPR disease in Year 2 in order to devise vaccination and active surveillance strategies against this disease. In Project Year 3, a brucellosis serosurvey in small ruminants is planned in order to monitor progress in controlling this important zoonotic²⁵ disease. Monitoring information will allow the SIVPSS to intensify vaccination in problem areas, reinvigorate public health messages and conduct field studies to understand why in some regions brucellosis in humans is not falling as expected.

70. **Subcomponent 3.2 Strengthening the Private Veterinary Practice System**

71. **Support to Kyrgyz Veterinary Association (KVA):** Veterinary professional associations are a recognized component by the OIE of the official Veterinary Authority's sanitary system. Professional vet associations directly represent the interests of its members (vets and paravets in Kyrgyzstan) and indirectly of consumers of vet services through assuring that vets offer up to date services desired by clients. A Kyrgyz Vet Association is under development since 2015 with assistance from an FAO-TCP, which is supporting associations at the raion and national levels. The ATMP will build upon and support these nascent vet associations as an integral part of the national livestock sanitary system and as a mechanism for introducing practical continuing education to Kyrgyz vets and paravets.

72. The ATMP makes an allocation for study tours, technical assistance, office equipment and communications, translation and publishing of technical training materials and, most importantly, for training Master Trainers (plus contracted subject matter specialists) to provide practical, current continuing education for upgrading skills of community-based veterinarians and paravets. The Master Trainers will also provide technical content for dairy and meat hygiene messages to smallholders in the Project's value chains.

73. Master Trainers will be hired by the KVA and will receive technical assistance on (i) upgrading practical clinical diagnosis and treatment, preventive medicine and reproduction skills; (ii) managing a small business/veterinary practice; and (iii) dairy and meat hygiene extension on the farm. Master Trainers will provide Induction and Refresher training on clinical medicine and surgery, preventive medicine, pregnancy diagnosis, disease recognition and other contemporary courses of practical value to private practice veterinarians and paravets. Master Trainers will lead the Veterinary Accreditation process whereby private practice vets are officially accredited (through short courses and an examination) to the SIVPSS. Only Accredited Veterinarians will be eligible for carrying out delegated tasks from the SIVPSS under contract. These Master Trainers will, from Project Year 2, be upgrading skills of up to 100 vets and paravets per year. Subject matter specialists from Kyrgyz institutions or the private sector will be contracted for specific short courses. The model for Master Trainers comes from veterinary privatization programmes in other Central Asian/Eastern European countries and some technical assistance will be sourced from these countries.

74. Additionally, these Master Trainers will provide technical support to smallholder producers under Subcomponent 1.1 on dairy, meat and honey production and handling best practices. The Master Trainers will provide extension messages to and monitoring of uptake by community-based providers. It is anticipated that Village Health Committees will be involved (Subcomponent 1.2) as the most effective and sustainable deliverers of these messages (at no costs to the Project).

75. The ATMP will provide funds for Kyrgyz professionals to attend two World Veterinary Association (WVA) Conferences and to organize up to five annual conferences for Kyrgyz vets, paravets and animal health related organizations.

76. Funds will be provided for the Executive Board's operating expenses such as meeting venues and travel; a vehicle and its running expenses; and hiring a driver and bookkeeper. Project support for the KVA's operational expenditures will be provided on a declining basis whereby the KVA would be fully covering these costs by project completion. The Project will assist the KVA to develop a business plan to ensure sustainability.

²⁵ Zoonotic diseases are those those that affect animals and humans and can be passed from animals to humans. Over 75% of infectious diseases in humans have their origin in animals.

77. **Support to Kyrgyz Veterinary Chamber:** The IFAD/World Bank-funded AISP helped establish a Kyrgyz Veterinary Chamber as an essential structure, the Veterinary Statutory Body, according to OIE standards. The Kyrgyz Veterinary Chamber is now functioning well, is the first Veterinary Statutory Body among countries in Central Asia and is recognized internationally for its innovative and professional activities. To date the Chamber has registered nearly 700 Kyrgyz vets and 1,500 paravets as well as maintained a large amount of OIE and Kyrgyz documents in its online web site (www.vet-palata.kg).

78. The ATMP will limit its support to procurement of a larger server capacity (for additional databases), updated computers, printers, internet communication equipment and a car. One study tour is planned to observe operations and organization of one or more European country veterinary chambers.

79. **Subcomponent 3.3 Strengthening the Supporting State Institutions** The two relevant State research institutes, the Kyrgyz Livestock and Pasture Research Institute (KLPRI) and the Kyrgyz Scientific Research Veterinary Institute (KSRVI) will be supported via contracts to develop and deliver innovations in their particular research and competence spheres as well as deliver innovations suggested by the Project. For instance, the KLPRI would be contracted to supervise and manage pasture 'compartments' in Naryn oblast that meet definitions under the OIE Terrestrial Code. Such compartments will facilitate animal identification and offtake of grass-fed fat lambs for export. Another possible field for the KLPRI is to investigate and implement a pilot for the use of the lactoperoxidase system for short-term (~6 hours) milk preservation. The KSRVI will be contracted to organize and supervise quality control for a PPR serosurvey (Year 2) and brucellosis serosurvey (Year 3). The MoAM's State Selection Breeding Center will be provided some limited support to improve its efficiency in provision of improved bovine semen, liquid nitrogen and technical assistance, which are all essential services for dairy cattle raisers in the milk value chain. The Project will assist the SSBC to develop a business plan to ensure sustainability.

D. Lessons learned and adherence to IFAD policies

Lessons learned

80. Appendix 3 provides a comprehensive overview of the lessons learned from the past and ongoing IFAD's and other donors' operations in the country. The key ones are:

- Observations of the supervision missions for the LMDP I indicate consistently that there is an improvement in livestock productivity in the project communities. Over the past 3 years, milk yields are up on average from 4-5 to 6-7 litres per cow/day; and weight gains for cattle bred for meat are up from 280 kg to 300 kg prior to slaughter. This is attributable to the combined contribution of interventions under the AISP and LMDP I, most notably improved access to remote pastures and water; and a reduction in disease. In regard of zoonotic diseases the number of people diagnosed with brucellosis has been reduced from 2,296 in 2012 to 678 in September 2015. This translates into estimated US\$ 8.5 million economic revenues (reverted medical treatment expenditures or reverted economic losses). In view of these increased impacts there is a growing realization that access to remunerative markets is needed for farmers to turn this into higher incomes, and in order for the livestock sector to contribute effectively to improved nutrition and food security beyond producer household level.
- There is a significant untapped potential in livestock as an income source for smallholders: rearing traditions and prevailing mentality are not naturally conducive to optimize the income generated from livestock. There is a general perception among most smallholders that a milking cow is rather considered as a valuable asset for family nutrition than an income generating production unit. The expected production increases from the improved pasture management will lead to increased surplus, which is in turn would lead to an ever increasing number of smallholders learning to earn income from livestock. In IFAD's experience such a transition will, however, require intensive support to profitably link smallholders with the value chain. To

mention the key concerns, first, the smallholders will need improved financial literacy in order to improve their decision making in commercial dairy primary production; second they will need to cooperate to improve their milk quality collectively and submit to controls; third they will need to improve new negotiating and collective bargaining capacity when cooperating with a commercial partner to receive their fair share from the surplus generated by improved quality of produce.

- The main difficulty in linking the farmers in profitable **dairy value chains** is milk collection and cooling. Milk collection and cooling centers are few, and most of the milk is collected by roaming middlemen with poor quality control and monitoring systems. Collectors' milk quality check is limited to some organoleptic evaluation (mainly looking at water addition and acidity). Readiness for quality control at the plant is generally also poor. Evidence from other donor programmes that have sought to improve the quality of livestock produce emphasizes the importance of channelling support to farmers with close involvement of the processors that are the immediate purchasers of the primary produce. This will facilitate the formulation of a set of appropriate standards to farmers by which the processors wish them to abide; ensure commitment by processors to the standards to which the farmers are trained and setup of suitable monitoring arrangements case by case.
- **Poor animal health situation and limited access to veterinary services** are a major limitation of further livestock sector development in Kyrgyzstan. Diseases and parasites negatively impact animal productivity and human health. In addition, the presence of animal diseases causes great economic losses to rural poor representing a large group of the region's livestock owners and strongly affects their ability to trade on national and regional markets. In IFAD experience, successful animal disease control requires intensive public awareness efforts and strong logistical coordination at community level. The successful brucellosis control program implemented under AISP demonstrated the importance of intensive public awareness and community level planning of vaccination campaigns with private veterinarians.
- An Eurasian Economic Union veterinary inspection mission report has assessed the livestock sanitary system as unsatisfactory. The mission recommended denying export of any live animals or non-processed meat or milk and dairy products into the territory of the EAEU from the Kyrgyz Republic, negatively affecting incomes of livestock smallholders. This is not due to outbreaks and uncontrolled diseases but primarily because **the livestock sanitary situation is either unknown or undocumented**. Thus, there is a clear need to strengthen both key public and private sector arms of the Kyrgyz Veterinary Authority which facilitate livestock commodity trade and safe food.
- **There are several donors currently engaged or planning to engage in support for rural agriculture financing** in Kyrgyzstan, including through the provision of credit lines of significant volumes (for example, the funding available from the Russian-Kyrgyz Development Fund alone equals to some 37 percent of the total outstanding loan portfolio of the whole banking sector). Based on the above, there will be no value added in IFAD-funded credit lines, and as such these will not be provided. Instead, IFAD should partner with existing funders and FSPs with the goal of linking ATMP beneficiaries with them to benefit from their credit resources.

Alignment and harmonization

81. The Project is closely aligned with and in support of the Government's key priorities and strategies for increased market integration and commercialization of the livestock sector, as expressed in the NSDS 2013-2017. It is also in support of the priorities and strategies for nutrition and food security expressed in Government's Concept of Food Security 2009-2019.

82. Seeking to avoid duplication of efforts, foster complementarities, while taking advantage of livestock and business-related best practices and technological innovation, the overall intervention strategy will be based on: (1) partnership building with the country's private, commercial sector, sectoral stakeholders; and local research institutions and universities, particularly for expanding

technical assistance services and market channels; (ii) harmonization with initiatives from development partners present in the country, such as the FAO, the World Bank, the EBRD and the German Agency for International Cooperation (GIZ). The latter two have been involved in value chain development pilot initiatives on which the IFAD Project has drawn some lessons for this proposal; and (iii) overall adherence to the principles of the Paris Declaration on aid effectiveness. In practice, harmonization and sectoral coordination will be provided in the context of the proposed Platform for country dialogue on 4P.

Adherence to IFAD policies and guidelines

83. The design of the ATMP is fully compliant with IFAD's policies on: **Targeting, Gender Mainstreaming, Rural Finance and Climate Change**, and it is fully aware on the new **Social, Environmental and Climate Assessment Procedures**, and will seek their compliance in Project implementation at operational and field levels (see Appendices 2, 3, 4 and 5 for details).

84. Accordingly, the Project, which is based on key training, technical assistance, educational and technological development and dissemination activities and investments, will promote a gender-sensitive and enabling implementation environment through its farming and processing promotion components. IFAD's targeting requirements are addressed by ensuring that rural women, women heads of household, the rural unemployed and young people, do participate in the Project's activities. The Platform will provide a space for discussing IFAD and government policies.

85. Activities under the Project will be in line with IFAD's approach to scaling up results²⁶ – since IFAD's interventions under Component 1 will leverage substantial financial resources of existing local partners (FSPs and development funding institutions). It should be noted that IFAD would strive to crowd in partners who otherwise may not engage in agriculture (for example, the Russian-Kyrgyz Development Fund that has no experience in agricultural lending but would be interested in getting engaged if assured of the quality of prospective agricultural borrowers). Through partnering with IFAD, these partner institutions will be able to gain experience and build capacity in working with agricultural projects, which will ensure the sustainability of results and the continuation of impact beyond the Project's life.

86. The development of new innovative lending products for agriculture will also contribute to the scaling up approach: a small investment of IFAD's funding for the product development and piloting is expected to leverage much larger resources of local FSPs and development funding institutions as these products will be launched in the market using FSPs' own funding.

87. Component 3 scales up IFAD's involvement in the animal diseases control programmes (brucellosis and echinococcosis) that have been taken place since the AISP and now are ongoing under the LMDP, thus increasing livestock smallholders' resilience to outbreaks of animal diseases, and therefore improving their food security and nutrition.

88. Thus, the scaling up approach will be applied in two of IFAD's main lines of business: rural finance and pro-poor value chains. Moreover, by remaining in the livestock sector and by adding additional areas of engagement, specifically its marketing aspects and coverage of supplementary animal diseases, IFAD is expanding the functional dimension of the scaling up approach.

Environmental and social safeguards

89. The Project will invest in the development of micro- small- and medium-scale enterprises within the selected value chains that will have site-specific environmental and social impacts. To mitigate this impact, environmental assessments and compliance with national legislation will be built into the Project's formal operational procedures governing investment decision making. The Project is expected to reduce pressure on natural resources by providing the financial incentives for primary producers for enforcing more environmentally sound natural resource management practices, e.g., "less animals/ better animals", promoted by the two other projects of the country programme.

²⁶ IFAD's operational framework for scaling up results. December 2015.

90. Moreover, the technology innovation sub-projects are expected to address environmental issues related to fodder production including manure management for nitrogen cycle control and potential additional on-farm income.

91. To address possible environmental impacts, the Project will formulate an Environmental and Social Management Plan that will comprise: adequate mitigation measures; climate-smart agriculture practices and adaptation to climate change activities; and the necessary compliance with IFAD environmental, social and climate change safeguard procedures whilst seeking a sustainable management of natural resources in the targeted regions.

92. **Environmental classification.** The Project is classified as a Category B operation. This rating results from the few, identified negative environmental impacts that are expected from the Project's field activities. Investments in improved forage production, climate smart agriculture/ livestock production and green, more energy efficient agribusinesses are expected to result in positive outcomes. These developments will also enhance the resilience of rural households to climate change and reduce their vulnerability to extreme weather events.

III. Project implementation

A. Approach

93. The Project will be executed through a demand-driven approach, rather than the planning and definition of annually fixed targets. Incentives to participate will be promoted by the Project, i.e. the public sector (the push factor) while seeking the initiative and direct involvement of the private companies qualifying for the role of a Leading Entity (the pull factor).

94. The ATMP proposes a "cluster" approach to implementation whereby agribusinesses benefit from the technical assistance and better raw material base and, where needed, access to client-tailored financial services, while smallholders increase their access to markets and incomes from their livestock. This approach will also provide for stronger farmer-agribusiness linkages that will eventually generate a range of positive externalities, such as improved animal productivity, better cold chain infrastructure, more jobs in rural areas including for youth, etc.).

95. The Project will be executed through a value chain-wise approach, whereby the entry point is the value chain champion also referred to as a Leading Entity (LE). The ATMP will promote building viable business models (productive partnerships) and developing excellency in habit and trust among value chains actors. The Project aims at demonstrating that running the business models compliant with the international food safety standards is sustainable and credit-worthy. The ATMP will invite all interested value chain stakeholders to apply for the role of a LE.

The concept of a value chain champion refers to the willingness of a legal entity to invest time and resources (including non-economic resources, intellectual contributions, etc.) to increasing value chain competitiveness in a way that enhances benefits to small- and medium-scale producers. These entities are typically larger, financially stronger or more innovative firms, but the leadership can also come from a public-sector association or even a well-organized, skilled group of producers. Effective leadership necessitates transparent relationships with suppliers, a commitment to addressing constraints to smallholders' participation in the value chain, and a willingness to work with other stakeholders to solve industry-wide problems. The design team interacted with a number of agribusinesses active in the Kyrgyz food and non-food processing industry. These included large- and medium-scale dairy factories, the biggest slaughterhouse in the country, leather/wool/fur processors, bee-keepers' associations, etc. In addition, the team partnered with the Agribusiness and Small Business Advisory teams of the EBRD. This work indicated no shortage of potential LE's interested in participating.

96. The Project will incorporate a strategy to ensure women's inclusion in value chains and equitable access to opportunities. Such gender strategy would include: identification of nontraditional

livestock products which will primarily benefit female producers; promotion of women's employment especially at higher levels of the value chains (processing, retailing, etc.); and active communication campaigns on potential, new roles of women in livestock value chains.

B. Organizational framework

97. There are several institutions that have been engaged in implementation of the AISP in the past and in the ongoing LMDP (I&I) and which will continue to be involved in implementation of the Access to Markets Project (ATMP), thus scaling up implementation approach of the LMDP in the ATMP. These institutions are now and will be acting as beneficiaries and service providers at the same time. It is essential that their roles are clear and do not overlap, and their activities are well coordinated. The two major institutions that are key to successful implementation of AISP and LMDP and other projects are the Agricultural Projects Implementation Unit (APIU) under the Kyrgyz Republic Ministry of Agriculture and Melioration (MoAM), and the Community Development and Investment Agency (ARIS), a large organization with outreach on the ground that focuses particularly on community-based initiatives and has a mandate to alleviate poverty. These institutions will have the prime implementation responsibility for the ATMP as well.

Project management

98. The MoAM will be the implementing agency for the Project. For details of the project organization structure see organigram in Appendix 5

99. **Project Oversight.** There are a number of bodies that already exist that will be used to help provide guidance and support for the Project. They include the MoAM Steering Committee and the ARIS Steering Committee. The Project would use both of these and, as and when necessary, when the matters concerning the ATMP would be placed on the agenda of these two bodies for discussion and advice. In addition to these two bodies, a Project-specific oversight body would be formed under the ATMP to provide guidance for Project management. It is referred to as the Project Coordination Group (PCG). It includes representation from each of the implementing agencies, representation from the PC level and private sector. The body will have a balance between government and civil society members. It meets semi-annually and on an ad hoc basis as required. The PCG is an advisory, not an executive body. It would review progress of the Project against targets and its success in meeting the performance indicators. It would also review the progress against the annual work programme. It would be also a sounding board for discussing issues that arise during implementation and for which it can provide insight and advice to Project management. It would also provide the opportunity for Project management to receive feedback on new ideas or approaches that it is considering to introduce under the Project. It will feed its findings and proposals into the Platform for PPPP.

100. As was already mentioned, the organizational arrangements for the Project focus on the APIU and ARIS being the two main institutions charged with responsibility for coordinating and implementing the Project. The APIU would have responsibility for coordinating activities of a number of institutions. Each will have its clear areas of responsibility and each will be financially accountable for the implementation of its own activities, with the APIU having overall responsibility for Project oversight and coordination. Memoranda of Understanding (MOUs) will be drawn up between the APIU and ARIS and between the APIU and the other implementing partners for which the APIU has responsibility.

101. **APIU.** The responsibilities of APIU are the following:

- Overall responsibility for Project implementation, coordination, oversight and reporting to IFAD and the government. That includes liaising closely with ARIS, which will operate a relatively independent series of activities, but will nevertheless be accountable to APIU as part of the Project implementation team.
- APIU's *core responsibilities* include: financial management, comprising procurement, disbursement, accounting, auditing and financial reporting; managing the performance of the partner national organizations that are responsible for implementation of specific Project

activities (SIVPSS, BAS, FSPs, KVA, Vet Chamber, KLPRI, KSRVI, and SSBC); shortlisting, evaluating, contracting and managing the performance of service providers; overall Project monitoring and evaluation (M&E), including baseline and impact surveys, and knowledge management; reporting for all Project activities including assimilating the reports from ARIS and from the other implementation partners; maintaining a results-based system of assessing the performance of the ATMP partner organizations employing trigger and benchmarks; all Project-level documentation and reporting; technical, financial and management backstopping and technical assistance in support of the Project implementation partners; and poverty targeting, gender mainstreaming and the pursuit of other social goals and indicators of Project effectiveness and impact.

- In terms of the *implementation of Project Components and Subcomponents*, the APIU would be responsible for:
 - Most of Subcomponent 1.1 (excluding those aspects that will be implemented within the PUUs and smallholders' groups), i.e. capacity building of selected value chains' stakeholders, specifically training, study tours and advisory services through BAS and other contracted service providers
 - All of Subcomponent 1.3 through a contracted service provider
 - All of Component 2 through FSPs
 - Most of Component 3 (excluding those aspects that will be implemented within the PUUs/AHSCs, VHCs and smallholders' groups), i.e. strengthening various institutions with their respective assistance, specifically through the SIVPSS, KVA, VetC, KLPRI, KSRVI, and SSBC.

102. **ARIS.** The responsibilities of ARIS are the following:

- Overall responsibility for all Project *implementation at the community level*, focused on PUUs and smallholders' groups including the administration of all Project grant funds, i.e.:
 - Facilitate the dialogue between the farmers and their groups and the agribusinesses applying for the role of a LE. During the plenary meeting the role of ARIS is critical to ensure that the responsibilities of farmers in their new role of formal suppliers of a given agribusiness
 - Design, in close collaboration with SBS and a legal expert, and conduct training on "Doing Business Together: options, benefits and responsibilities"
 - Mentor farmers and their groups in adapting product specifications of the buyers
 - Catalyze farmers' cooperation by providing evidence of economic benefits of joint product bulking and marketing (relying on international experience)
 - Aligning LMPD activities to enhance the effect of the productive partnership (e.g. focus on blanket vaccination and pasture productivity to reduce the production costs)
 - ARIS shall have no particular role in elaboration of the VCDBPs but takes part in the Selection Panel.
- Coordination and accountability for effective performance of the combination of its own ARIS staff and technical inputs from the government's technical agencies (for example SIVPSS), public organizations (like KVA and Vet Chamber) and Project's contracted service providers in the implementation of the community-focused activities for which ARIS is responsible.
- *Monitoring and evaluation* of its own activities, including monitoring of the related performance indicators, assembly and dissemination of information for *knowledge management*, and the related reporting both to its own management and in a synthesized form to the APIU to ensure that the APIU is fully informed and can provide timely and appropriate guidance to ARIS.
- *Financial management* of all those activities for which ARIS is responsible, comprising procurement, disbursement, accounting, auditing and financial reporting.
- In terms of the *implementation of Project Components and Subcomponents*, ARIS would be responsible for:

- Some elements of Subcomponent 1.1 related to mobilization and mentoring of PUUs and smallholders' groups
- All of Subcomponent 2.1 that deals with administration of grants
- Some elements of Component 3 related to mobilization of AHSCs and private vets.

Implementation strategy

103. The Project's implementation aims at achieving the following three outcomes, through their corresponding components: **Outcome 1. Capacity for sustainable, efficient livestock production, processing and marketing enhanced; Outcome 2. Efficiency and profitability along targeted, smallholder-inclusive livestock value chains increased;** and **Outcome 3. Upgraded Kyrgyz livestock sanitary system.**

Component 1. Livestock Value Chains Development

104. Within two months of the Project start-up, the APIU will recruit a Value Chain Development Coordinator (VCD Coordinator) for coordination of activities to be implemented under Component 1. S/he will be initially supported by an international Value Chain Development Adviser (VCD Adviser) who would be contracted within three months of the Project start-up and who would help the APIU to detail the PIM (outlined in the Project Design Report) including TOR for all service providers and other consultants. TOR for VCD Coordinator and Adviser are presented in Appendix, Annex 1.

105. As has been already mentioned, the ATMP will be executed through a value chain-wise approach, whereby the entry point is the value chain champion. Specifically, only eligible participants of the selected value chains (based on VCDBPs) will receive Project support, for example, raw milk suppliers of a given dairy factory or farmers/their groups supplying live animals to a slaughterhouse, as well as inputs/services suppliers (e.g. feed producers, private veterinarians, zootechnicians); in other words, all actors of a value chain driven by the LE.

106. The ATMP will closely work with all interested value chain actors to facilitate the provision of quality inputs (e.g. feed, heifers), services (e.g. vaccination, AI) or training. For example, a dairy factory would provide smallholders with pedigree heifers, quality feed and ear tags packages and deduct the cost of this in-kind credit from what it paid farmers for their milk supplies.

107. **Community mobilization and mentoring** activities will be executed by ARIS, which will support civil society organizations and producer groups building on the experience of LMDP-1 and 2 and other development initiatives. Building on the results of the two earlier projects of IFAD in the country, this Project will promote close collaboration between the Pasture Users' Unions and agribusinesses. For example, improved road infrastructure may enable raw milk collection from the summer pastures that could result in significant incremental income for PUUs' members.

108. **Support to preparation of VCDBPs and business advisory services** to LEs will be channeled through EBRD's Small Business Support (SBS) facility with the ultimate goal of ensuring the quality of the business plans and to bring the businesses to a credit-worthy level. The support will be demand-driven and, based on the accumulated experience, will include for example quality management systems, marketing, financial management and food industry standards.

109. **Training activities.** Within three months of the Project start-up, the APIU will recruit an international Livestock Value Chain Training Specialist who, in partnership with ARIS and nationally recruited specialists, will work with the future value chain champions to determine training needs and, within six months of Project start-up, prepare a detailed training programme including the identification of potential trainers.

110. Training programmes will include existing national and regional training products that have been evaluated and accepted as appropriate for the target audience and new training products developed by contracted individuals, faculties and institutes based on their respective competencies. The training curricula will be prepared by the tendered international service provider together with the national and regional specialists. Training material may be in the form of infographics, videos, concise

manuals available to training beneficiaries in digital form. Identified trainers will receive competency-based Trainer of Trainers (ToT) training from international Technical Assistance (TA). Knowledge retention of trained trainers will be tested 6 months after the completion of ToT courses, with low knowledge retention rates leading to replacement or retraining.

111. Trained trainers will be contracted to deliver competency-based training on a per head basis, with knowledge retention/adoption by trainees to be tested with a statistically significant sample of randomly selected trainees between 6-12 months after receiving training. Training locations and times will be determined in close consultation with trainees (e.g. local administration office, successful farmer premises or university faculties).

112. The ATMP may partner with other development initiatives in particular with LMPD-1 and 2 (Component 3: Diversification and market/value initiatives) working to rebuild or create supply chain infrastructure and provide access to finance for investment. Where possible, the Project will attempt to identify local providers and work with them to develop and supply needed services.

113. While the ATMP will support all livestock chains in Kyrgyzstan, the priority should be given to dairy (cattle and non-cattle), wool (merino sheep and yak) and bee-keeping as these subsectors in Kyrgyzstan are largely driven by smallholders and rural women.

Component 2. Livestock Value Chains Financing

114. Though the APIU will exercise the day-to-day oversight of the ATMP, it will not interfere with the lending activities of the external partners and Financial Service Providers (FSPs). The APIU will recruit a Rural Finance Coordinator to oversee the activities under Component 2.

115. The APIU should promote social performance ratings of FSPs, the collection and monitoring of relevant financial and outreach indicators, and the development of appropriate management information systems, so that performance information is used as a management tool.

116. The APIU should also promote the participation in the Microfinance Information eXchange (MIX) Market, to promote transparency in the sector. FSPs can also use the MIX Market to compare their performance with that of their peers.

117. The APIU will do the necessary work to prepare MOUs with prospective partners – providers of external credit lines, with which Project beneficiaries will be linked to access credit.

118. The APIU will also work to select FSPs interested in developing new innovative agricultural products and solutions and committed to disseminating lessons learnt as a result of this process.

119. The FSPs meeting the eligibility criteria should be issued a “Request for Proposal” and should submit their product development proposals to the APIU. Together with FSPs, the APIU will develop Terms of Reference (TOR) for external product development consultants as well as budgets necessary to implement the process and disseminate the results. A clear dissemination plan should be part of the TOR for each of the products.

120. To facilitate the FSP selection, the APIU will form a Council of experts, which may consist of both local, as well as international rural finance specialists. The Council may include experts of IFAD and FAO to ensure technical competence as well as objective third party assessment of the quality of the proposals.

121. Together with the Council, the APIU will develop a scoring methodology to help guide the selection process. The scoring criteria may include (but are not limited to):

- a) FSP’s compliance with the eligibility criteria;
- b) Prior FSP’s experience in the development of agricultural financial products and solutions;
- c) FSP’s openness and willingness to share results as evidenced by prior publications (including online platforms);

- d) FSP's willingness to co-fund the proposed product/solution (at least 50% of the requested amount);
- e) The proposal's focus on IFAD's target group and project objectives;
- f) The innovativeness of the proposal and its potential to generate lessons for the country's agricultural sector.

122. Together with the Council, the APIU will develop the weighing of the criteria to facilitate the assessment of the proposals.

123. All decisions on the FSP selection should be documented in detail and clearly show that all selected FSPs meet the eligibility criteria and satisfy other Project requirements, and include detailed TOR for each of the product prior to the implementation of the product development process.

124. The APIU should establish a threshold budget per one product proposal (e.g. up to US\$ 100,000) and limit the number of proposals per one FSP (e.g. up to 2).

125. All of the FSP selection stages and conditions should be part of the PIM.

Component 3. *Upgrading the Kyrgyz Livestock Sanitary System*

126. The APIU will have Memoranda of Understanding with relevant implementing agencies, specifically with the SIVPSS for implementation of Subcomponent 3.1, the KVA and Veterinary Chamber for Subcomponent 3.2, and the KLPRI, the KSRVI and the SSBC for their respective activities under Subcomponent 3.3. A similar approach for implementation arrangements has been established under the ongoing LMDP, whereby the implementing partners undertake their activities under the guidance of and accountable to the APIU, with roles and responsibilities specified in MOUs. TOR for the key consultants to be recruited under the Project are provided in Appendix 4, Annex 1.

127. ARIS will facilitate coordination of animal health and production related activities under Component 3 with PUUs, AHSCs, Village Health Committees, local community-based private veterinarians and processing firms that are proposed under Component 1. This coordination will particularly include dairy and meat hygiene extension activities and managing the grant system for community-based private practice vets. Memoranda of Understanding will be agreed upon between the APIU and ARIS.

128. The Project will be encouraged to pull all the international TA within this Component under one contract with the OIE, as it is the case now under the LMPD. Thus, the Project will be scaling-up the already proven approach to implementation that is successfully applied under the LMPD.

C. Planning, M&E, learning and knowledge management

Planning, M&E and learning

129. The Project's Logical Framework would form the basis for the overall results-based monitoring and evaluation (M&E) system and comprise performance monitoring and impact assessment. An extended version of the PLF (on Project File) has been also prepared to undertake a more comprehensive Project M&E. The APIU M&E staff would have lead responsibility for all internal M&E of the Project.

130. **Performance monitoring** will concentrate on the financial and physical outputs and the outcomes of Project activities and be based upon semi-annual and annual progress reports. The APIU would submit progress reports in English to Government (MoAM and MoF) and IFAD.

131. **Outcome monitoring** will assess the use of outputs and measure their benefits at beneficiary level. The monitoring will focus on the accessibility of Project outputs and the extent to which they provide benefits to the target groups in terms of access to finance, services, and markets. It will also include the Project's achievements in terms of returns, added value, direct and indirect job creation, and prospects for sustainability. Towards this, the Project will conduct periodical standardized **Field Surveys** with Project beneficiaries. The questionnaires for the Field Surveys would be drafted by the

M&E staff of the Project with technical support as applicable, and be standardized for each type of Project activity. The Project may make use of an information collection platform such as iformbuilder²⁷ or similar, for conducting the survey and maintaining the database.

132. The objective of the Field Surveys on the outcome level would be to: (i) provide management with information on quality and usefulness of Project activities for planning and taking corrective action to remedy emerging issues; and (ii) collect qualitative data on Project activities to identify success stories and models for replication.

133. **Impact assessment.** A set of indicators, include IFAD Results and Impact Management System (RIMS) 1st and 2nd level indicators, have been provided in the Project's Logical Framework. In line with RIMS, two anchor indicators are identified for assessing the impact of the Project: household asset ownership and child malnutrition. Data sources for these two main indicators will probably include: (i) National Statistical Committee; (ii) the Ministry of Health; and (iii) the Project M&E database.

134. The indicators will shape the Project's Baseline Survey. The objective of the baseline survey will be to establish benchmarks for time-series comparisons between Project beneficiaries and non-beneficiary "control" populations. All M&E data will be disaggregated by sex and assessed relative to the Project's targeting and gender checklists (see Appendix 2).

135. A **Mid-Term Review** (MTR) would be carried out towards the mid of the Project's life. The MTR would cover, among other things: (i) physical and financial progress as measured against Project Annual Work Plans and Budgets (AWPBs); (ii) performance and financial management of implementing partners, e.g. FSPs, private sector service providers, institutes and universities; and (iii) an assessment of the efficacy of technical assistance, training programmes and Project-supported rural finance and of their delivery of Project benefits to the Project's target groups, input suppliers and service providers and rural unemployed. In addition, it is expected that the Review would look at the effectiveness and sustainability of the Platform for PPPP, KVA, Vet Chamber; the provision of rural finance and veterinary services; the socio-economic status of less advantaged rural women and men; and environmental impact. Review findings on implementation progress would inform decision-making, as appropriate, on adjustments to the content, financing and targeting of the Project's components. The findings and recommendations of the MTR would feed into any subsequent scaling up analysis and any further expansion of Project modalities in support of the livestock sector.

136. **Thematic studies:** The APIU would contract or carry out thematic impact studies that will look at the impact of activities under Project Outcomes. Such impact assessment would include an analysis of the effectiveness of: partnerships between LEs and smallholder farmers; the rate of adoption of technology innovation; stakeholder perspectives of Platform effectiveness; or specific studies on veterinary security and livestock product markets. The topics for these thematic studies will be identified in consultation with relevant stakeholders during Project implementation.

137. Progress reports, concurrent participatory impact monitoring and evaluation, Participatory (Rapid) Rural Appraisals (PRAs) and the findings of ad hoc special studies would be compiled by the APIU M&E staff into Annual Project Performance Reports. Data sources for the annual performance reports will include: Project baseline survey; semi-annual physical and financial progress reports for each component; FSP records and Project-related reports including borrowers' business plans; the M&E staff qualitative interviews and case studies with targeted beneficiaries; and reports by the APIU and ARIS and technical advisors on challenges and Project facilitation strategies for their respective component implementation responsibilities. Annual Project Performance Reports would feed into Annual Stakeholder Review and Planning Workshops, feedback from which will be factored into the Project AWPB for the succeeding year, thus closing a circle of participatory, demand-driven planning and implementation.

²⁷ See www.iformbuilder.com.

138. During the final year of Project implementation, as part of the preparation of the IFAD-required **Project Completion Report/Impact Assessment (PCR/IA)**, the M&E data collected over the Project implementation period will be used as part of a thorough assessment of Project achievements, in terms particularly of changes in the livelihoods of beneficiaries that relate to the implemented Project activities, and the sharing of lessons learned and development experience. The Project completion process will include stakeholder workshop(s) to give Project stakeholders the opportunity to: (i) evaluate the performance of the Project; (ii) promote accountability; and (iii) identify factors and responsibilities to increase the likelihood of sustainability, together with key success factors and shortcomings.

139. In addition to the M&E arrangements described above, Project external monitoring will comprise: IFAD supervision, including operational reviews of the Project, covering a random sample of Project activities, to be carried out in Project Years (PYs) 2 and 4 by independent auditors and under Terms of Reference acceptable to IFAD and also risk-based financial management supervisions (see Appendix 7 for further details); ad hoc thematic/diagnostic studies; yearly audits; and a self-assessment Project Completion Evaluation conducted by the APIU in cooperation with IFAD.

140. **Learning and Knowledge Management.** To ensure capture of experience gained (learning), comprehensive provision has been made for M&E of Project activities and for a participatory approach to the operation of the Project's proposed Management Information System (MIS). The Platform for PPPP is expected to play a major role in consolidating Project learning.

141. With regard to knowledge management, the APIU would be responsible for jointly developing a Communication Strategy for the Project and, thereafter, documenting the technical content (outputs) of Project activities and the institutional arrangements for their delivery. Provisions have been made under the Project's budget for: media production; the development, printing and dissemination of training materials; and setting up a Project web page.

D. Financial management, procurement and governance

142. **Governance and Financial Management Risks.** The country risk is rated as high. Transparency International's Corruption Perception Index ranked Kyrgyzstan 123 of 167 countries in 2015 with a score of 28 (marginally up from 27 in 2014). The PEFA updated in 2014 (last one in 2009) shows considerable improvement in several areas of weakness found earlier in the Public Financial Management as a result of the reform initiatives. Despite these improvements some areas remain weak and require further improvement.

143. **Financial Management.** To determine the project specific control risks a Financial Management (FM) risk assessment of the proposed Project and its fiduciary arrangements has been completed. Detailed FM assessments were performed of the proposed implementing units, i.e. the APIU and ARIS. FM assessments concluded that the Project FM arrangements and internal control systems would satisfy IFAD's minimum requirements to provide accurate and timely information on the progress of project implementation and guarantee the separation of functions through several levels of independent controls.

144. Overall, the FM risk is rated as Medium and residual FM risk is Medium too after the conditions for disbursement and proposed mitigation measures have been met. A Summary of actions needed to mitigate FM risks is shown in Appendix 7.

145. The APIU and ARIS will be responsible for the financial management of the Project, and the APIU will be supported by the pre-identified implementing partners. The financial management department of the APIU and ARIS are staffed with reasonably experienced staff in IFAD's FM. To ensure workload balance and segregation of duties additional Disbursement Officers for the APIU and ARIS will be recruited competitively to help on FM of this Project.

146. **Accounting and financial reporting arrangements.** The Project will adopt accounting procedures and policies consistent with international accounting standards (cash basis). Financial

reports will be consolidated at the APIU, which will also be responsible for assurance that funds have been used for the purposes intended by the implementing partners. Eligible expenditures from IFAD Loan and Grant resources will be executed by the APIU and ARIS towards their respective activities, and the units will take responsibility for these expenditures from the IFAD and counterpart contributions. Consolidated quarterly financial reports will be furnished by the APIU to IFAD. The financial statements will be in formats acceptable to IFAD and will include inter alia a Sources and Uses of Funds Statement, with classification of expenditures by categories and components, sub-component and comparisons against approved budgets.

147. The Project will use C1 Accounting System. Before disbursement begins, both the APIU and ARIS will configure the current accounting systems to include the new Project.

148. **Budgeting.** Budgets, facilitated from the beneficiary level, will include all activities for the year, segregated by quarter and by financier. Consolidation of the AWPB for approval will be APIU's responsibility. To facilitate transparency in the budgeting, and facilitate implementation and monitoring of the budgeted activities, approved AWPBs will be accessible to all Project and implementing partner staff.

149. **Disbursement arrangements and Flow of Funds.** Four US\$ denominated Designated Accounts will be opened for the Project by the Recipient at a commercial bank identified by the MOF and acceptable to IFAD to receive the Loan and Grant proceeds - two Designated accounts for the APIU (One for the Loan and another for the Grant) and two for ARIS. Equally, four Operating accounts in local currency will be opened by the Recipient to receive transfers from the corresponding Designated accounts. Funds flow from the Designated accounts to operating accounts in local currency for each of the financing sources with an authorized allocation of approximately 6 months of Project expenditures, Replenishments to the DA will use the impress modality. Withdrawal applications will be prepared by the FM units of both institutions every 3 months or when 30% of the advance has been expended, whichever occurs earlier. Details of the disbursement arrangements, including the amounts advanced to the Designated Accounts, will be stated in the Letter to the Recipient.

150. **Counterpart contributions.** Counterpart contributions from GoK will be applied to meet taxes and custom duties as well some SIVPSS's operational expenditures. The funds will flow to separate accounts opened for the APIU and ARIS on quarterly basis or on a need basis.

151. **Internal controls and internal audit.** Given the geographical spread of the Project, the Project makes annual provisions for Internal Audit of ARIS, while an Internal Audit firm will be hired at mid point of the Project to carry out an internal and performance review for the activities implemented by the APIU and its implementing partners to ensure that funds are used for intended purposes. Staffing levels are commensurate with appropriate segregation of duties. IFAD's no objection for the Project Implementation Manual is a disbursement conditionality.

152. **Audit Arrangements.** Annual Project financial statements will be audited by private auditor/s in accordance with the International Standards on Auditing (ISA) under TOR cleared annually by IFAD.

153. **Flow of Funds.** A chart of the anticipated flow of funds under the Project is provided in Appendix 7, Annex 1.

154. **Procurement.** On 3 April 2015, the Parliament of the Kyrgyz Republic adopted a new Law on Public Procurement²⁸, which became effective on 14 May 2015 (PPL). The new law introduces, inter alia, framework agreements and a special commission for reviewing procurement-related disputes. Prior to the adoption of the new law, public procurement in the Kyrgyz Republic was regulated by the 2004 Public Procurement Law (the PPL 2004), which was based on the 1994 UNCITRAL standards and was to a large extent outdated.

²⁸ <http://cbd.minjust.gov.kg/act/view/ru-ru/111125>

155. There is no recent public procurement assessment undertaken by the WB or other international body. The WB continues to undertake procurement pursuant to its own procurement guidelines. While the new PPL seems to represent a significant improvement of the PPL 2004, it is realistic to expect delays in the improvement of the practical aspects while the new system is being adopted. Moreover, in regard of procurement of consultancy services, the PPL and its application do not meet the standards of the WB and IFAD procurement rules. In view of the above, the Project will adopt the IFAD Procurement Guidelines.

156. As part of the initial design of the ATMP, IFAD undertook a procurement capacity assessment of the APIU, and ARIS using the IFAD tool for Assessment of Agency Capacity to Implement Procurement. Overall, the procurement capacity and procedures are assessed as satisfactory in all aspects of advertisement, drafting of bidding documentation, evaluation and contract management. Further details, including the first 18-month Procurement Plan, are provided in Appendix 8.

157. **Governance.** The project design incorporates various measures to assure good governance as indicated by overall operational accountability and transparency; financial management; procurement of goods and services; environmental governance; gender equality and mechanisms for complaints and remedies. These include: (i) the terms and conditions of MOU with all implementing partners; (ii) consistent stakeholder representation in the Project's planning, M&E/ KM and impact assessment cycle, affording mechanisms for complaints and remedies; (iii) fair participation of women beneficiaries in all activities and levels of the Project; (iv) social, environmental and climate change safeguards and guidelines detailed in the PIM; (v) application of guidelines and procedures for procurement consistent with the current IFAD Procurement Guidelines; (vi) close supervision and implementation support by IFAD, including risk-based financial management supervision and operational reviews; and (vii) provision for regular external audit.

E. Supervision

158. **Supervision and implementation support.** A supervision plan covering the period up until MTR will be agreed at Project start-up. The ATMP will be supervised directly by IFAD. IFAD supervision would include **risk-based financial management supervisions**, and also **Operational Reviews** covering a random sample of Project activities, to be carried out in Project Years (PYs) 2 and 4 by independent auditors and under TOR acceptable to IFAD. Details of the financial management supervision are provided in Appendix 7. The timely completion of: (i) a baseline survey according with the Project's outcome/ output indicators; and (ii) the RIMS study on child malnutrition (IFAD's Results and Impact Monitoring System) and household living standards are fundamental to effective Project supervision.

F. Risk identification and mitigation

159. Key Project implementation **assumptions** are that the country's economy maintains its stability, and that consistency is established between the stated government policies/ and rural economic reforms supporting private sector development and the agriculture sector *vis-à-vis* the actual implementation of these policies and reforms. Moreover, it is assumed that the endemic animal disease situation in the country remains stable and that Kyrgyz authorities implement all the major EAEU requirements in terms of biosecurity and food safety.

160. **Participation.** The main risk relates to potential failure in correctly aligning the incentives for the various actors, farmers, companies and FSPs expected to participate in the Project. Mitigating measures include an in-depth, participatory analysis of production/ business opportunities, input and other constraints, and actual financial risks, based on formulated bankable business plans. Mitigation in this regard also involves a widespread informational campaign to reach out to all Kyrgyz agribusiness and formulate inclusive VCDBPs, meaning that farmers – and in particular farming households – receive better profits from their livestock and gradually change their behaviour towards loyal suppliers of raw material. ARIS mediation of the dialogue between the LE and its suppliers will be critical.

161. **Market prospects.** All value chains face market and commercial risks from price fluctuations and competition from imports and other domestic agri-business enterprises. The products targeted for the Project support will be the ones with strong current and future demand on domestic and especially on export markets as the domestic market size is limited. Value chain participants will receive training on how to position their products in these markets in order to maximize the returns in the face of strong competition; diversify their production base in order to withstand price fluctuations; as well as to interpret market information.

162. **Contracts.** The risk exists that contractual obligations, e.g., for product delivery to collection points, will not be fully observed and that informal/ formal contracts will break down. Remedial measures will include the establishment of proper contracts, training on business management, and regular monitoring by the Project management.

163. **Outbreak of a notifiable transboundary animal disease** could adversely affect the ATMP value chains through bans on official export of live animals and livestock products. The highest risks come from outbreaks of foot and mouth disease, PPR or a pox virus disease in sheep or goats. **Mitigating** this disease epidemic risk includes: (i) initiating the FAO-OIE Global Strategy for Control and Eradication of PPR by the SIVPSS and community-based vets, (ii) procuring PPR vaccine but with the discretion to procure emergency supplies of vaccine against other diseases should an outbreak occur, and (iii) strengthening SIVPSS staff facility with SPS Agreement standards, upgrading critical competencies specifically for active surveillance and reporting, and rehabilitating regional vet diagnostic laboratories.

IV. Project costs, financing, benefits and sustainability

A. Project costs

164. The main assumptions underlying the derivation of Project costs, estimated Project costs and financing plan are:

- The Project costs are based on June 2016 prices.
- The proposed Project will be financed over a five-year period.
- Inflation. The estimates National Bank of the Kyrgyz Republic for the consumer price inflation in 2016-18 is 5-7%, while EIU inflation forecast for Kyrgyzstan is around 7%. Therefore 6.5% of inflation was set as a base for the analysis for the whole project period 2017-2021.
- Exchange Rate. The Base Exchange rate for this analysis has been set at KGS 69 to US\$1 as an official exchange rate prevailing in June-July 2016.
- The Project costs are presented in both KGS and US\$. Conversions from current US\$ values into KGS use constant purchasing power exchange rates.
- Taxes and Duties. Overall, the items to be imported for the Project do not attract any import and excise duties. However, there is VAT of 12% levied on all imported and locally procured goods and services. International technical assistance carries a 10% tax on non-residents. For directly recruited local staff and national technical assistance, the project would cover the employer's tax of 17.25% (Social Insurance). The Government would finance the cost of all taxes on goods and services procured under the Project.
- The Government will finance the cost of all taxes on goods and services procured under the Project as well some operational expenditures incurred by the SIVPSS towards the Project activities.

165. The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 55.4 million (KGS 3.9 billion). Physical and price contingencies are low at 2% of the total Project costs due to the fact that investments associated with the various grants and external credits represent around 66% of the total Project costs (expressed as a lump sum, no contingencies). The foreign exchange component is estimated at US\$ 29.5 million or

about 53% of the total Project costs. Taxes and duties make up approximately US\$ 1.18 million. The project management cost makes about 3% of the total Project costs²⁹. The summary and detailed cost tables are presented in Attachment 1 and 2 to Working Paper 4. Attachment 3 to Working Paper 4 provides the assumptions behind calculations of unit costs and physical quantities.

Table 2: Project Costs by Components

	(KGS Million)			(USD '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
A. Component 1. Livestock Value Chains Development								
1. Subcomponent 1.1 Capacity Building of Livestock Value Chain Stakeholders	236,2	78,0	314,2	3 423,2	1 131,0	4 554,2	25	8
2. Subcomponent 1.2 Product Aggregation Enhancement	297,5	446,3	743,8	4 312,0	6 468,0	10 780,0	60	20
3. Subcomponent 1.3 Platform for Public-Private-Producers Partnerships Development and Knowledge Management	19,1	1,8	20,8	276,5	25,5	302,0	8	1
Subtotal Component 1. Livestock Value Chains Development	552,8	526,1	1 078,9	8 011,8	7 624,5	15 636,2	49	29
B. Component 2. Livestock Value Chains Financing								
1. Subcomponent 2.1. Access to External Credit Lines	690,0	1 035,0	1 725,0	10 000,0	15 000,0	25 000,0	60	46
2. Subcomponent 2.2. Innovative Financial Products	47,6	-	47,6	690,0	-	690,0	-	1
Subtotal Component 2. Livestock Value Chains Financing	737,6	1 035,0	1 772,6	10 690,0	15 000,0	25 690,0	58	47
C. Component 3. Upgrading the Kyrgyz Livestock Sanitary System								
1. Subcomponent 3.1 Strengthening the State Veterinary Sanitary System	284,1	401,2	685,3	4 117,4	5 814,8	9 932,2	59	18
2. Subcomponent 3.2. Strengthening the Private Veterinary Practice System	32,4	14,1	46,5	469,1	204,4	673,5	30	1
3. Subcomponent 3.3. Strengthening the Supporting State Institutions	30,6	15,9	46,5	443,7	230,3	674,0	34	1
Subtotal Component 3. Upgrading the Kyrgyz Livestock Sanitary System	347,1	431,2	778,3	5 030,2	6 249,5	11 279,7	55	21
D. Project Management								
Project Management	85,9	10,0	95,9	1 245,5	144,3	1 389,7	10	3
Monitoring and Evaluation	12,1	0,3	12,4	174,7	4,8	179,5	3	-
Subtotal Project Management	98,0	10,3	108,3	1 420,2	149,1	1 569,2	9	3
Total BASELINE COSTS	1 735,5	2 002,6	3 738,1	25 152,1	29 023,0	54 175,1	54	100
Physical Contingencies	16,3	19,7	36,0	235,5	285,9	521,4	55	1
Price Contingencies	90,6	42,2	132,8	483,6	227,2	710,8	32	1
Total PROJECT COSTS	1 842,4	2 064,5	3 906,8	25 871,3	29 536,1	55 407,4	53	102

B. Project financing

166. An IFAD loan, US\$12.7 million (23% of the total Project costs), would finance: 22% of the Livestock Value Chains Development Component (US\$3.49 million), 65.6% of the Upgrading the Kyrgyz Livestock Sanitary System Component (US\$7.99 million) and 72.9% of the Project Management Component (US\$1.2 million). An IFAD grant of US\$12.7 million (23% of the total Project costs) would be used to finance: 56.9% of the Livestock Value Chains Development Component (US\$9.02 million), 2.7% of the Livestock Value Chains Financing Component (US\$0.65 million), 21.1% of the Upgrading the Kyrgyz Livestock Sanitary System Component (US\$ 2.57 million) and 25.4% of the Project Management Component (US\$0.42 million). It is expected that the FSPs' contribution would be US\$20.0 million, which would be used to finance 78% of the Livestock Value Chains Financing Component. The Government contribution is estimated at US\$ 1.6 million (3%) and includes contributions from its budget primarily to cover a part of SIVPSS O&M costs as well as all taxes (see below). The project beneficiaries' contribution is estimated at US\$8.39 million, which would be used to finance 20.8% of the Livestock Value Chains Development Component and 19.5% of the Livestock Value Chains Financing Component.

167. Table 3 provides a summary by the Project financing plan by components. Table 4 shows the financing plan by expenditure categories.

²⁹ Relates to APIU and M&E costs only. ARIS overheads are included in the TA budget line.

Table 3: Financing Plan by Components (USD'000)

	IFAD Loan		IFAD Grant		FSP		Ben Contribution		GOVT: Taxes		GOVT:Budget		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Component 1. Livestock Value Chains Development														
1. Subcomponent 1.1 Capacity Building of Livestock Value Chain Stakeholders	-	-	4 708	98,9	-	-	-	-	54	1,1	-	-	4 762	8,6
2. Subcomponent 1.2 Product Aggregation Enhancement	3 490	32,4	4 000	37,1	-	-	3 290	30,5	-	-	-	-	10 780	19,5
3. Subcomponent 1.3 Platform for Public-Private-Producers Partnerships Development and Knowledge Management	-	-	307	99,1	-	-	-	-	3	0,9	-	-	310	0,6
Subtotal Component 1. Livestock Value Chains Development	3 490	22,0	9 015	56,9	-	-	3 290	20,8	57	0,4	-	-	15 852	28,6
B. Component 2. Livestock Value Chains Financing														
1. Subcomponent 2.1. Access to External Credit Lines	-	-	-	-	20 000	80,0	5 000	20,0	-	-	-	-	25 000	45,1
2. Subcomponent 2.2. Innovative Financial Products	-	-	690	100,0	-	-	-	-	-	-	-	-	690	1,2
Subtotal Component 2. Livestock Value Chains Financing	-	-	690	2,7	20 000	77,9	5 000	19,5	-	-	-	-	25 690	46,4
C. Component 3. Upgrading the Kyrgyz Livestock Sanitary System														
1. Subcomponent 3.1 Strengthening the State Veterinary Sanitary System	7 588	70,6	1 698	15,8	-	-	-	-	1 028	9,6	430	4,0	10 743	19,4
2. Subcomponent 3.2. Strengthening the Private Veterinary Practice System	79	11,0	511	71,0	-	-	100	13,9	29	4,1	-	-	720	1,3
3. Subcomponent 3.3. Strengthening the Supporting State Institutions	327	44,8	364	49,9	-	-	-	-	39	5,4	-	-	731	1,3
Subtotal Component 3. Upgrading the Kyrgyz Livestock Sanitary System	7 994	65,6	2 573	21,1	-	-	100	0,8	1 097	9,0	430	3,5	12 194	22,0
D. Project Management														
Project Management	1 201	81,3	250	16,9	-	-	-	-	26	1,8	-	-	1 478	2,7
Monitoring and Evaluation	17	8,8	174	90,2	-	-	-	-	2	1,1	-	-	193	0,3
Subtotal Project Management	1 218	72,9	424	25,4	-	-	-	-	28	1,7	-	-	1 671	3,0
Total PROJECT COSTS	12 702	22,9	12 703	22,9	20 000	36,1	8 390	15,1	1 182	2,1	430	0,8	55 407	100,0

Table 4: Financing Plan by Expenditure Accounts (USD '000)

	IFAD Loan		IFAD Grant		FSP		Ben Contribution		GOVT: Taxes		GOVT:Budget		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs														
A. Goods														
Goods, Equipment and Materials	5 810	89,3	-	-	-	-	-	-	696	10,7	-	-	6 506	11,7
B. Vehicles														
Vehicles	1 227	89,3	-	-	-	-	-	-	147	10,7	-	-	1 374	2,5
C. Technical Assistance														
International TA	-	-	1 393	91,0	-	-	-	-	138	9,0	-	-	1 530	2,8
National TA /a	-	-	5 628	98,6	-	-	79	1,4	-	-	-	-	5 706	10,3
Subtotal Technical Assistance	-	-	7 020	97,0	-	-	79	1,1	138	1,9	-	-	7 237	13,1
D. Training and Workshops														
Training and workshops	-	-	648	100,0	-	-	-	-	-	-	-	-	648	1,2
E. Grants	3 490	32,4	4 000	37,1	-	-	3 290	30,5	-	-	-	-	10 780	19,5
F. Technology Grants	-	-	1 000	100,0	-	-	-	-	-	-	-	-	1 000	1,8
G. External Credit	-	-	-	-	20 000	80,0	5 000	20,0	-	-	-	-	25 000	45,1
H. Civil Works	524	89,3	-	-	-	-	-	-	63	10,7	-	-	586	1,1
Total Investment Costs	11 050	20,8	12 669	23,8	20 000	37,6	8 369	15,8	1 044	2,0	-	-	53 131	95,9
II. Recurrent Costs														
A. Salaries and Allowances	857	100,0	-	-	-	-	-	-	-	-	-	-	857	1,5
B. Social Fund	125	100,0	-	-	-	-	-	-	-	-	-	-	125	0,2
C. Operating Expenses														
Vehicles	534	50,0	11	1,1	-	-	7	0,6	114	10,7	401	37,6	1 068	1,9
Office	113	65,0	16	9,4	-	-	11	6,2	19	10,7	15	8,7	174	0,3
Other	23	43,7	6	12,4	-	-	4	8,3	6	10,7	13	24,9	52	0,1
Subtotal Operating Expenses	670	51,8	34	2,6	-	-	22	1,7	138	10,7	430	33,2	1 294	2,3
Total Recurrent Costs	1 652	72,6	34	1,5	-	-	22	1,0	138	6,1	430	18,9	2 277	4,1
Total PROJECT COSTS	12 702	22,9	12 703	22,9	20 000	36,1	8 390	15,1	1 182	2,1	430	0,8	55 407	100,0

C. Summary benefits and economic analysis

Expected results and benefits

168. The Project's focus on sustainable livestock production of smallholder farmers, together with the improvement of local agro-processing enterprises and supporting input suppliers and service providers, is expected to lead to the transformation of existing low productive activities (livestock production and processing) into competitive and financially-viable businesses with access to technology, markets, investment resources, and technical assistance. Since most Project financing will reach the beneficiaries directly, through the dedicated financing windows and targeted technical capacity building and technology development, the benefits accruing to these primary target groups will be reflected in physical productive assets and built knowledge capacities.

169. Expected **Project results** include: increased farm-level livestock production/ productivity; higher quantity and quality of livestock input to processing and consumption; reduced losses during

storage and transportation; flatter seasonal supply and more stable prices to producers and produce collectors; enhanced overall processing quality and efficiency; greater product diversification; and increased commercialisation of the sector providing expanded employment and increased incomes among the beneficiaries. These results also include the enhanced social and economic leverage of rural women in their communities while preventing migration of young people to towns and regional countries. At farm and processing unit/ enterprise levels, dedicated financial business plans and technical assistance will support the expected financial and economic returns.

170. **Household impact.** From food security, economic inclusiveness and risk mitigation perspectives, the increased volumes, more reliable and higher-quality milk and meat production will reduce the dilemma now faced by smallholder farmers of: either selling products or consuming them at household level. The Project will facilitate the security of both: increased year-round cash income and stable family consumption. In addition to supporting women farmers and managers in production, the Project will also move them further up the value chains by engaging them in processing, management, marketing, and ownership.

Beneficiaries

171. **Beneficiaries.** The Project is expected to reach approximately 28,000 households, with various and complementary activities and investments. This includes: (1) an estimated 26,500 members of smallholder farmers who will participate in the more than about 180 partnerships, and in training and technical advice on animal health, feeding, hygiene and handling, and who will be exposed to the ATMP-disseminated technology innovations; and (2) about 2,800 labourers benefiting from the increased employment opportunities. These two types of users-beneficiaries are expected to overlap.

172. In line with the Project's targeting, gender and governance strategy, the Project will ensure that rural women and young people participate, directly, and take advantage of its farm/ processing support activities and other support investments.

Economic benefits

173. The Project is expected to lead to increased income of farmers, households and rural entrepreneurs. Benefits would accrue from: (i) increased livestock productivity and increase livestock produce due to the application of improved inputs/technology and enhanced husbandry; (ii) an increased proportion of marketed farm produce; (iii) reduced losses during production and processing of dairy and meat produce through innovative technology; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs; (v) revival and increase of export of livestock commodities; (vi) avoided costs of zoonotic diseases (PPR and others) due to improved animal sanitary system; (vii) enhanced access to larger and longer-term credit; (viii) increased employment, either for hired or family labour, for both on-farm and off-farm activities; and (ix) tax revenues as a result of increased volume of taxable production. Principal increases in incomes would be largely dependent on farmers/household/rural entrepreneurs adopting proposed activities, which the Project will promote directly through the VC development, thus improving the market access, supporting marketing linkages and private sector development, and generally creating a favourable economic environment that encourages farmers/rural entrepreneurs to produce more competitive products.

Economic analysis

174. A comprehensive set of financial analyses of the Project's investment activities have been undertaken, including the preparation of six farm and two agro-enterprise models along dairy and meat value chains. The financial analysis presents typical dairy and meat sub-sector farm and enterprise models, which, in turn, compose a representative model of milk and meat production/collection/ processing value chains.

175. The main results of the financial analysis include: (i) a significant increase in gross and net returns from each model when compared to the without programme situation; and substantial

benefit/cost ratios illustrating the financial worth of the investments. The net present values (NPV) range from US\$291 to US\$ 686,996, while, the IRRs from 14% to 57%. These results are robust and highly comparable to those estimated for similar operations in neighbouring Tajikistan, Uzbekistan and South Kazakhstan.

176. **Value chain models.** Indicative dairy and meat production/ processing value chain prototypes were modelled, involving farming/ processing inputs, labour (family and hired) and overall incremental investments, in the context of the project-promoted asset-building investments (FSP loans and ATMP grants). About two-third of the overall incremental benefits would flow to the smallholder farmers, and the share of their marketed produce would grow by at least 30%. A key result of the improved animal breeding/ feeding activities is that yields will increase by at least 25%, representing potential additional supply of animal products to processors and overall aggregate production. It is also estimated that, at investment completion, the Project will annually generate around US\$ 475 000 of additional government's fiscal revenue from incremental taxable production.

Economic justification

177. The economic analysis of the overall Project indicates that the gains of the total investments, under the ATMP, are significant and robust in economic terms. The analysis results in an internal **economic rate of return (IERR) of 19.4 per cent** and a NPV of US\$45.0 million taken over 20 years with the benefit stream based on the quantifiable benefits that relate directly to the activities undertaken by the Project.

178. **Sensitivity Analysis.** Sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits. The results are presented below. A fall in total Project benefits by 20% and an increase in total Project costs by the same proportion would reduce the base IRR to about 13%.

179. The switching value for total Project benefits is about 56%; while for Project costs it is approximately 106%. A one-year delay in Project benefits reduces the IRR to 16%. With a two-year delay in Project benefits, the IRR falls to approximately 14%.

180. **Greenhouse gas emission.** It is expected that the Project would be reducing GHG emissions as it promotes the "less animals, better animals" concept, while the technology innovation sub-projects are expected to address environmental issues related to fodder production and manure management for nitrogen cycle control. An EXACT analysis has confirmed that there will be a reduction of CO₂ by 1,835,528 ton per annum translated into incremental economic benefits of US\$7.3 million (@US\$4 per ton). Inclusion of this additional benefit into the economic analysis generates ERR of 27.3% and NPV of US\$87.8 million.

D. Sustainability

Sustainability

181. The sustainability of the Project's results is, inter alia, based on: (i) the value chain champion business and technical capacity building activities to be promoted; (ii) the demand-driven nature of the intervention; and (iii) the preparation of VCDBPs as the basis for all investment which should lead to better integrated and more equitable and profitable value chains.

Exit strategy

182. The Project's sustainability is also based on: an exit strategy that comprises: (i) ensuring the ownership by users-beneficiaries of the financed activities; (ii) the participatory development of demand-driven technology; (iii) integration along value chains including input suppliers and service providers; (iv) the sustainable establishment of the Platform for Public-Private-Producers Partnerships Development; and (v) limited project operational, staff, and recurrent costs.

183. For the public goods of the ATMP (Subcomponent 3.1), the skills and investments in the livestock sanitary system will make the SIVPSS, as the Veterinary Authority, more robust, advancing toward meeting international standards and recognized equivalence with other veterinary inspection services among trading partners. The enhanced competence, understanding and use of the SPS Agreement will serve the Kyrgyz government well in promoting higher-value official livestock trade and in defending Kyrgyz consumers and livestock industries from import of unsafe livestock products or other foods, thus increasing the country's export earnings and food safety. This higher competence of the SIVPSS will require larger and continuing funding from the public treasury. After the Project ends, the government will need to maintain sufficient funding for continued investments and running costs. Some of these expenditures could be covered through user-fees from producers (vaccinations) and processors (export certification).

Scaling-up

184. The Project takes a pilot approach to the development of efficient, sustainable livestock value chains development in Kyrgyzstan, including the field testing of innovative technology and associated capacity building of supporting institutions. The experiences so derived will be scaled up/replicated in other parts of the country where similar value chains exist. This also involves major potential for scaling up and synergies in relation to subsequent donor programmes.

185. The Project will leverage substantial financial resources of existing local partners (FSPs and development funding institutions). It will strive to crowd in partners who otherwise may not engage in agriculture (for example, the Russian-Kyrgyz Development Fund that has no experience in agricultural lending but would be interested in getting engaged if assured of the quality of prospective agricultural borrowers). Through partnering with IFAD, these partner institutions will be able to gain experience and build capacity in working with agricultural projects, which will ensure the sustainability of results and the continuation of impact beyond the Project's life.

Appendix 1: Country and rural context background

General

1. Kyrgyzstan is a mountainous, landlocked country of 198,500 km² bordering Kazakhstan, Uzbekistan, Tajikistan and China. Ninety four percent of the territory is at an elevation of more than 1,000 meters, and 40 percent above 3,000 meters. About 45 percent of the land is considered not suitable for human habitation. Nearly half of the country's total area – some nine million hectares – is pastureland, which plays a key role in the country's economy, society, and culture. The population of Kyrgyzstan is 5.8 million of which 65% live in rural areas and depend predominantly on agriculture and livestock for their livelihood, but remittances also play an important role as an income supplement. Life expectancy for men is 65 years and for women 73 years. In 2011, the average household size was 4.9 members with rural households being larger than urban (5.3 versus 4.0 members). With an average GDP per capita of US\$ 1,269 (2014), Kyrgyzstan is classified as a lower middle income country.

2. The country experienced a recovery of the economy in the relative political stability following the overthrow of the Bakiev government in 2010, culminating in a growth of 10.9 percent in 2013. Growth slowed to 3.6% in 2014 as the economies of Russia and Kazakhstan weakened and local currency depreciated by about 19%. With economic contraction in Russia, growth slowed down in 2015 to 4.8% year on year in January-October owing mainly to the regional recession triggered by the depreciation of the Russian rouble. Inflation is estimated at around 6.4% in 2015. Continued low global food and fuel prices will limit inflationary pressures in 2016. Depreciation of the Kyrgyz currency and harmonisation with Eurasian Economic Union (EAEU) tariffs will likely contribute to inflationary pressures in 2017³⁰. The EAEU, which Kyrgyzstan joined in May 2015, allows for the free movement of labour, goods, services and capital within the bloc comprising Russia, Kazakhstan, Belarus and Armenia. On the other hand, trade prospects with countries outside the union are hindered by the gradual erection of common external trade tariffs. Most notably it will weaken import trade with China and damage re-exports to neighbouring Tajikistan and Uzbekistan.

3. The government's National Sustainable Development Strategy 2013-2017 (NSDS) has set four priority areas for economic development comprising agriculture, mining, energy and tourism. The NSDS's eight specific objectives for the development of the agricultural are summarized as follows: (i) improve the system of management and regulation, (ii) improve availability and quality of services, (iii) improve product quality, (iv) establish a modern market infrastructure, (v) increase production and exports, (vi) reclaim and gain lands for production, (vii) develop the processing industry; (viii) increase effectiveness and efficiency of land use.

Rural poverty

4. As a result of broad post-independence economic reforms, poverty in Kyrgyzstan declined significantly and rapidly during 2000–2009, from 52% of the population in 2000 to 32% in 2009. The UNDP Human Development Index (2014) for Kyrgyzstan is 0.655, ranking it in 120th place out of 188 countries. Poverty headcount ratio at national poverty lines was 30.6% in 2014 (32.6% for rural areas, 26.9% for urban areas), and the poverty gap was 5.4%. In 2012, 20% of the population subsisted on less than USD 3.10 per day. Poverty is more prevalent and most severe in rural and mountainous regions.

5. The World Food Program (WFP) Emergency Food Security Assessment of March 2012 estimated that 18% of households were food insecure, of which 3% were severely food insecure and 15% were moderately food insecure. In addition, nearly 20% of food secure households used negative coping strategies for accessing food such as eating less preferred food to ensure their health and nutritional status of vulnerable members. The households in rural areas often used coping strategies, which jeopardize their livelihood sources, such as consumption of seed stocks, decreased

³⁰ Economist Intelligent Unit's (EIU) forecasts, EIU Kyrgyzstan Country Report, July 2016.

expenditures for agricultural inputs and sale of livestock. This indicates that these households could be at-risk of becoming food-insecure in the event of further shocks (e.g. prices increases). Food insecurity was more prevalent in rural areas. In 2012, 24% of rural households were food insecure (5% severely and 22% moderately food insecure) while 9% of urban households were food insecure (1% severely and 8% moderate).

Agriculture

6. Although 65% of the population is rural, and 31% of the total workforce works in the agriculture sector, agriculture contributed only 17.3% of total GDP in 2014 – down from 34% in 2002. Main reasons are limited access to agricultural machinery and inputs by smallholder farmers, and decline in public expenditure towards agriculture; as well as the proportionally higher growth of the industry sector and services. Despite its declining share of GDP, agriculture and livestock remain the backbone of the economy, providing substantial employment, playing a critical role in both household food security and consumer price stability, and as a leading source of exports, with food exports comprising 28.5% and agricultural raw materials 3.8% of all merchandise exports in 2013. Total gross agricultural output in 2014 was USD 3,034.3 million with crops and livestock sharing about 50% each.

7. The agricultural economy of Kyrgyzstan is based on approximately 360 thousand farm units, essentially run by individual families, with a number of these farms having scaled up their size and operations in response to growing internal and external market opportunities. Most farms, however, tend to be relatively small, with their production orientated by subsistence requirements and occasional commercial offtake, often practicing mixed crop-livestock farming as well as transhumant management of their animals (from spring/autumn pastures to summer and winter pastures).

Pastures and livestock

8. Livestock products represent a substantial part of the diet and as much as 20 percent of total food consumption in kilocalorie (Kcal)/per capita. In 2014, the livestock industry accounted for 5.8 million sheep and goats, 1.5 million cattle (including yaks), and 0.4 million horses. More than 90 percent of the livestock are owned by small-scale farmers. In 2011, some 76% of rural households and 18% of urban households owned livestock. For those who owned livestock, the number of livestock was quite similar between rural and urban households: on average two head of cattle, 8-9 small ruminants (sheep and goat), and eight poultry.³¹ Severely food-insecure households continued to be less likely to own livestock while moderately food-secure households were more likely to own livestock than food-secure households: 42%, 65% and 50% respectively.

9. Between 2009-2014 the number of heads of cattle, horses and sheep has increased by 14 percent, 16 percent and 27 percent respectively,³² indicating a growing pressure on pasture reserves. In the same time, dilapidated infrastructure has inhibited use of distant summer pastures leading to over-grazing of village/nearby pastures. This situation, together with insufficient quality feed in the winter and early spring, has resulted in low livestock productivity. The new Pasture Law and improved pasture management by Pasture User's Unions are expected to reverse this trend.

10. Between 2008-2013, the production of cattle milk and meat has increased by 12 percent and 6 percent respectively.³³ The World Bank estimates that milk production could potentially increase by 70 percent and mutton and beef by 50 percent.

11. Poor animal health situation and the lack of effective veterinary services are the two largest overriding limitation of further development of livestock primary production. Diseases and parasites negatively impact animal productivity and human health. In addition, the presence of animal diseases causes great economic losses to rural poor representing a large group of the region's livestock owners and strongly affects their ability to trade on national and regional markets. Most of the

³¹ WFP Emergency Food Security Assessment of March 2012

³² FAOSTAT.

³³ FAOSTAT.

currently reported food safety problems are directly related to animal diseases such as brucellosis and echinococcosis.

12. Recent accession to the EAEU has increased the opportunities for both, agricultural exports and imports. Liquid cow milk and dairy products occupy 82 percent of the export structure (in monetary terms). The Union, and Kazakhstan in particular, has become Kyrgyzstan's major trading partner for agrifood. However, all livestock sub-sectors, notably live animals; meat&edible offal; fish&crustaceans; dairy eggs & honey; other products of animal origin) suffer from decline in sales on external markets. In the same time the import of meat and meat products and live animals grew significantly in 2010-2014.³⁴ The ability to compete on the regional market is hindered by the lack of compliance with the EAEU technical regulation and phytosanitary and veterinary measures³⁵.

13. While the national food industry is featuring healthy growth (+25 percent for meat processing, +14 percent for dairy³⁶), rural households do not seem to benefit from this positive trend, which indicates little inclusiveness and distorted governance of the current setup of supply. Farmers, especially the dairy farmers, are price-takers. The governance of livestock value chains, especially of the dairy chain, is currently centered in the hands of middlemen.

Rural Finance

14. In terms of physical infrastructure for financial services delivery, Kyrgyzstan is far behind more developed countries. For example, according to the International Monetary Fund (IMF) Financial Access Survey,³⁷ in 2014 there were 7.83 bank branches in the country per 100,000 adults. Generally, Kyrgyzstan is characterized by low levels of financial service usage. For example, account ownership³⁸ in the country is 18.5 percent of adults as compared to 51.4 percent in Eastern Europe and Central Asia (ECA)

15. However, in the area of credit usage the country is ahead of its peers – 13.5 percent of adults used credit in the past year while this figure was 12.4 percent for ECA and 7.5 percent for lower middle-income countries. Credit usage is even higher among rural residents (14.3 percent) and the poorest 40 percent of the population (14.4 percent).

16. There has been a substantial increase in the amount of credit (by banks and microfinance organizations) directed to the agricultural sector. While in 2004, commercial banks only provided KGS 113 million to agricultural enterprises, this increased in 2010 to KGS 3,350 million. Similar figures hold for credit provided by nonfinancial institutions (micro-finance): it increased from KGS 348 million in 2004 to KGS 5,000 million in 2010. However, the amount of credit provided remains low compared to its share in GDP or employment. The most common type of credit in the agricultural sector is credit provided by non-financial institutions (61% of all credit directed to the agricultural sector).

17. According to the Credit Information Bureau "Ishenim", the vast majority of all loans outstanding are micro and small loans: 78 percent of loans are below KGS 250,000 (USD 3,571), and 29 percent – below KGS 50,000 (USD 714) as of January 2016.

³⁴ The import of meat and meat products – particularly of poultry meat and that of frozen beef to some extent – grew by 77 percent and the import of live animals grew more than 3-fold from 2010-2014.

³⁵ Ministry of Agriculture, Russian Federation Federal Service for Veterinary and Phytosanitary Supervision, Provisional report on the Eurasian Economic Union inspection experts of the animal origin production enterprises and products of the Kyrgyz Republic, Moscow, 2015

³⁶ Growth in output. Source: National Statistical Committee of the Kyrgyz Republic

³⁷ www.data.imf.org

³⁸ The account penetration level is the indicator commonly used to assess the number of the "banked" people in a country and the level of financial inclusion.

Appendix 2: Poverty, targeting and gender

National Context of Poverty

1. The Kyrgyz Republic is one of the poorest countries in the Europe and Central Asia (ECA) region with GDP per capita of about US\$1,269 in 2014³⁹. While the country made a major progress in reducing poverty in the first half of the last decade (from 68% in 2003 to 34% in 2008), the following years saw a stagnant trend due to economic contractions and political instability. The recent economic difficulties in Russia and devaluation of the ruble negatively affected Kyrgyz migrants' incomes and the country's remittance earnings. Between 2003 and 2013, Kyrgyzstan's GDP grew at 4% on average, which was the lowest rate in the ECA countries. According to the latest data, incidence of poverty stands at almost 31% in 2014, recording a marginal decrease from 37% in 2013.

2. About two thirds of the country's population live in the rural areas. The gap between urban and rural poverty rates has been steadily narrowing due to a gradual increase of the former. While incidence of rural poverty marked a marginal improvement from 41.0% in 2003 to 39.6% in 2008, poverty in urban areas increased by more than 10 percentage points during the same period – from 24.7% to 35.4%.⁴⁰ According to an assessment of the World Bank, more than 60% of poverty reduction in the country between 2003 and 2013 is attributed to the decline of rural poverty. However, in view of the fact that 73% of the total poor are rural residents (2013), efforts to combat poverty in rural areas continue to be important. Poverty also has geographical dimensions with mountainous areas recording higher incidences than flat lands (51% against 37% in 2012). Poverty is highest in Jalal-Abad (55.8%), followed by Osh (51.4%). Since Jalal-Abad and Osh are also the most populous oblasts in the country, together they are home to a large share of the country's poor households.

Table 5: Incidence of Poverty by Oblast (2012)

	Total	Urban	Rural
National	38.1	35.4	39.6
Issyk-Kul	28.1	22.4	30.4
Jalal-Abad	55.8	61.7	53.6
Naryn	39.9	26.9	42.0
Batken	34.2	38.7	32.9
Osh	51.4	54.8	50.0
Talas	39.6	23.6	42.2
Chui	16.6	24.0	15.0
Bishkek	21.4	21.4	-

Source: *Kyrgyz Republic: Food Prices and Household Welfare*, World Bank, 2015

3. In 2014 Kyrgyzstan's Human Development Index (HDI) was 0.655, ranking the country at 120 out of 188 countries in total⁴¹. The score is above the average of countries in the medium human development group (0.633), but below the ECA average (0.748). Key social indicators show recent improvements of access to health and education. Infant mortality rate declined from 30 per 1,000 live births in 2008 to 22 in 2012; under-5 mortality rate declined from 35 to 24 in the same period. Net primary school enrollment rate is high at 91% in 2012, which is an increase of 4 percentage points from 2008. While these achievements are significant, the country's performance still lags behind some other ECA countries (see Table 6 below).

³⁹ In PPP current dollar terms quoted in *Kyrgyz Republic: Poverty Profile for 2013*, World Bank, 2015. The data used in this report and the other World Bank publication (cited below) is derived from Integrated Household Surveys (IHSs) between 2003 and 2013.

⁴⁰ World Bank, *Kyrgyz Republic: Food Prices and Household Welfare*, 2015.

⁴¹ UNDP, *Briefing note for countries on the 2015 Human Development Report: Kyrgyzstan*, 2015.

Table 6: Key Social Indicators of Selected ECA Countries

	Life expectancy at birth	Infant mortality rate	Under-5 mortality rate	Adult literacy rate	HDI	GDI
Turkey	75.3	16.5	19.2	94.9	0.761	n.a.
Georgia	74.9	11.7	13.1	99.7	0.754	0.962
Armenia	74.7	14.0	15.6	99.6	0.733	1.008
Azerbaijan	70.8	29.9	34.2	99.8	0.751	0.942
Kazakhstan	69.4	14.6	16.3	99.7	0.788	1.002
Uzbekistan	68.4	36.7	42.5	99.5	0.675	0.945
Turkmenistan	65.6	46.6	55.2	99.6	0.688	n.a.
Tajikistan	69.4	40.9	47.7	99.7	0.624	0.926
Kyrgyzstan	70.6	21.6	24.2	99.2	0.655	0.961

Source: *Human Development Report 2015*, UNDP

4. The above-mentioned World Bank's poverty profile points out a high incidence of poverty among the youth. About 40% of the total poor are under 15 years old while this age group accounts for 32% of the total population. A strong relationship between the household size and poverty is observed: the poverty rate is higher among families with large members. Men and women are more or less equally represented in the category of the poor with women's share at 51% in 2013.

5. The Ministry of Social Development introduced a system to identify families in need of government support of social protection. Holders of Social Passport for Poor Families are identified through an annual survey conducted by *aiyl okmotu*. There are three categories of Social Passport holders according to income thresholds: the extreme poor, the average poor and the poor. As information collection and analysis is conducted manually, there exists a risk of data inaccuracy⁴². However, there is a broad consensus among community members and agencies working in rural areas that Social Passport is a useful tool to identify the poor families. Information on livestock ownership, welfare status and other information of the households in the *aiyl okmotu* can be collected and verified by PCs.

6. **Poverty among Livestock Farmers.** Livestock are important source of income and food for rural families. Almost all farming households, including landless ones, own livestock. The vast majority of the livestock farmers are smallholders, and ownership of mixed livestock is common (cattle, sheep and horses). According to the 2003 statistical data, nearly 90% of the cattle owning families have less than 5 heads⁴³. According to the current PUU data by ARIS, 80 percent of livestock farmers own less than 10 Livestock Units (LUs). Recently conducted LMDP I baseline survey found similar results: 87% of the cattle owning households have up to 5 heads of cattle. Among sheep owners, over 72% have up to 20 heads⁴⁴. The same survey found that family's income and poverty status is related to the number of animals it owns.

7. Generally speaking, a family owning less than 3 cows and 10 sheep, or about 5 Livestock Units (LU), is likely to be considered 'poor' although such perceptions are subject to local variations and the family's access to other income sources, such as sale of crops and remittances. Usually the poor livestock farmers graze their animals only in winter pastures and keep them in the homestead. Even their ownership of animals is small, the poor usually have surplus after home consumption, and sell their livestock products, such as milk, meat and live animals. With strong demand for livestock products, especially dairy, poorer families do not seem to have much difficulty in selling their products to traders at the village even if the quantity is small and variable. Producers' collective efforts to organize marketing appears limited except where externally supported interventions promote cooperatives, self-help-groups (SHGs) and other community-level institutional arrangements for the marketing of livestock products.

⁴² GiZ, *Developing Management Information Systems for Social Protection*, Workshop Proceedings, Bishkek, 2012

⁴³ Agricultural Census, National Statistical Committee.

⁴⁴ Rural Development Fund, *Livestock and Market Development Project: Baseline Survey Report*, prepared for the Agricultural Projects Implementation Unit under the Ministry of Agriculture and Melioration, 2014. The sample comprised 510 households randomly selected in 30 villages in Issyk-Kul, Naryn and Jalal-Abad provinces.

Gender

8. Kyrgyzstan's formal legal framework supports women's equality. Its constitution mandates equality between women and men, and prohibits gender-based discrimination. The 2003 law on Basics of State Guarantees for Ensuring Gender Equity grants equal rights and opportunities to women and men, and guarantees gender equality in governance structures. However, customary law and traditional practices continue to allow for male domination, and serve to undermine women's equal access to social, economic and political opportunities. In addition under-resourcing has limited the effectiveness of various state bodies responsible for gender policy⁴⁵.

9. While the legal framework provides women's equal access to and ownership of land, women have constraints to exercise the rights due to the traditional notion that it is men who head the households and in whose names the land is usually registered. A 2011 country assessment of access to land said that the formal law in Kyrgyzstan 'has not in most cases been successful in protecting and improving women's rights, including rights to access and own land'⁴⁶. Gender Development Index (GDI), a ratio of the female to the male HDI, is 0.961 for Kyrgyzstan, indicating that a gap still exists in human development between women and men. The Government, in its Sustainable Development Programme for 2013-2017, recognizes the challenges that Kyrgyz women are facing, including limited access to economic opportunities, prevalence of female workforce in the informal, high-risk labour market, and violence against women⁴⁷. In 2012 the Government adopted National Strategy for Gender Equality by 2020 and National Action Plan for Achieving Gender Equality for 2012-2014.

10. On average 27% of the households are headed by a woman, according to a recent population and health survey⁴⁸. Female-headedness in rural areas is 21%, much lower than 36% in urban areas. Female-headed households (FHHs) in rural areas increased only marginally since 1997 when it was 18%. However, it is likely that a number of rural households have their male members living outside their home to work as migrants, and women in such families shoulder the responsibilities of the heads of households.

11. **Women in the Livestock Sector.** Formal legislation does not distinguish the rights of women and men in access to pasture land. However, customary laws and social norms regard women's involvement in the livestock sector secondary to males'. A recent study on gender and pasture management points out that traditionally women's rights to pastures are secured through their male relatives⁴⁹. Women in female-headed households or in the households with absentee male heads rely on male relatives to access pastures.

12. While the livestock is considered primarily a male-led activity, women's engagement in animal husbandry is significant. Women are particularly active in raising young animals, milking, and preparation and sales of dairy products. Women in livestock owning households which graze animals in distant pastures during summer travel with the husbands and children, maintain seasonal home in the pasture and carry out domestic tasks in addition to their responsibility in animal raising and other economic and livelihood activities of the family.

13. Both women and men take agricultural loans, mainly for livestock breeding, but MFI data indicates that women borrow smaller amounts than men: 86% of female clients borrow less than \$1,100 and only two percent borrow over \$2,000⁵⁰. As the loan size becomes larger, the share of female borrowers goes down. Women tend to borrow more as a group than men (92% of female clients are group-based, compared with 33% for males). Women's limited asset ownership, hence availability of collateral is pointed out as a factor for their constrained access to larger loans.

⁴⁵ Gender Strategy for Livestock Management and Development Programme (I&II).

⁴⁶ USAID, *Property Rights and Resource Governance: Kyrgyzstan*, 2011.

⁴⁷ The Government of Kyrgyzstan, *The Kyrgyz Republic Sustainable Development Program 2013-2017*, 2013.

⁴⁸ National Statistical Committee et al., *Kyrgyz Republic: Demographic and Health Survey 2012*, 2013.

⁴⁹ Scalise, E. and Undeland, A., *Gender and Kyrgyz Community Pasture Management: a Case Study*, Paper prepared for presentation at the 2016 World Bank Conference on Land and Poverty, 2016.

⁵⁰ FAO, *National Gender Profile of Agricultural and Rural Livelihoods: Kyrgyzstan*, 2016

14. Traditionally women's involvement in collective decision makings on pasture management is limited. Women's representation in Pasture Committees (PCs) is reported to be very low, while progress has been being achieved under LDMPs supported PPU. The same study argues that PCs' investment reflects more of men's priorities, which are related to overseeing of the grazing animals, and focuses on infrastructure, such as roads and bridges. On the other hand, services and goods prioritized by women during the families' stay at the pasture land, such as electricity, drinking water, child support and health care are often lacking. It is encouraging, however, that some PPUs propose kindergarten in the pasture management plan.

15. The aforementioned study on gender in pasture management examines the experience of LMPD and points out the importance to emphasize 'meaning participation of women', which is facilitated by information dissemination on likely benefits which would accrue to them and addressing gender specific problems. It also argues that setting a quota for women's representation in PCs (30%) also led to innovative actions by project implementers, such as inclusion of female-dominant Village Health Committees as PC sub-committees and provision of grants, which require women's participation.

16. **Women in Livestock Value Addition and Businesses.** Generally speaking women's businesses in agriculture tend to be of small scale, usually home-based and under irregular working arrangements. Examples of successful women-centred initiatives of value addition and marketing of livestock products, such as high value handicraft, capitalize on flexible inputs of female members of agricultural households at the community, but operate to explore external markets. There are interventions in support of women's engagement in processing and marketing of livestock products, such as dairy products and handicraft, while economic viability and sustainability of some of those activities would need to be carefully examined. Understanding of the importance of business-oriented approach, addressing such aspects as market identification, product development and quality control, business planning and enterprise development, among the members is believed to make a significant difference for growth path of women's businesses.

17. Only a very small number of people have formal jobs in agricultural enterprises. Data suggests women are underrepresented in the formal labour force at private agricultural enterprises: in 2014 the share of female employees in small (50 or fewer employees), medium (51-200) and large scale (more than 200) agriculture enterprises is 23%, 21% and 39%, respectively⁵¹.

Target Groups

18. ATMP's primary target are smallholder livestock farmers who participate in and benefit from improved value chains. They comprise: (i) poor livestock farmers (those who typically own up to 2-3 cattle and 8-10 sheep/goats or up to 5 LUs); (ii) female members of livestock owning households, including female heads; and (iii) other smallholder livestock farmers. The poor livestock farmers (the first category) are most likely Social Passport holders. The other beneficiary groups consist of: (iv) agribusinesses (agro-processors, traders/aggregators and retailers); (v) input suppliers and service providers, including private vets; (vi) national scientific and academic institute staff; (vii) women-entrepreneurs; and (viii) the rural unemployed. For the latter, the Project support is expected to create greater decent employment opportunities in relation to on-farm and processing activities of targeted value chains. Particular attention will be given to the participation of rural women and youth, individually and in groups, as producers and as processing and market entrepreneurs.

Targeting Strategy

19. The Project has a national coverage and adopts demand-driven approach. The ATMP will work with selected value chains and provide holistic and coordinated support to different actors in a way that will improve the chains' overall performance and outputs. The Project will invite champions in the pre-selected value chains who are willing to launch or deepen sound business models under

⁵¹ National Statistical Committee data quoted in FAO, *National Gender Profile of Agricultural and Rural Livelihoods: Kyrgyzstan*, 2016

productive partnerships with producers and other actors in the chains. Smallholder livestock producers, who are the Project's primary target group, will be represented in each selected value chain and expected to improve their income opportunities through better integration with the market. ATMP's targeting strategy will build on the positive experience from LDMPs I and II, and incorporate the following principles: all stakeholders understand the pro-smallholder nature of the value chain development; selection of value chains and Leading Entities (LEs) will take into consideration positive impacts on the small producers' income and livelihood; PUUs, facilitated by ARIS and building on the positive experience of the LDMPs I and II, will play an active role in identifying and mobilizing the target groups at the community level in a transparent and participatory manner, and ensure to avoid the elite capture of the project opportunities and benefits.

20. The targeting strategy will incorporate specific measures and tools as follows:

- 1) Pre-selection of the Project-supported value chains will examine and confirm existing backward linkages and opportunities for/constraints to smallholders' entries. A special attention will be paid to include products and value chains, which are particularly beneficial to women and their income augmentation.
- 2) In addition to the above, the Project will support 'short' value-chain products of high-value, such as high-quality handicraft and special health products of livestock origin, which will be suitable for women's involvement. In this regard the project will engage technical assistance (consultant) for market assessment and product identification at the onset to focus on viable products⁵².
- 3) Selection of partner LEs will be based on set criteria, including a percentage share of smallholders (and the poor among them) among the supplying producers, their proven record on or commitment to adherence to the laws, as well as social and environmental standards, including respect to gender equality.
- 4) Partnerships formed under the Project along selected value chains will include representatives of relevant PUUs, who will be tasked to represent the interests of smallholders, including poorer ones.
- 5) Community mobilization process at the PUUs which will form partnership with LEs will be facilitated by ARIS and, as being undertaken in LDMPs, include participatory identification of target households based on a combination of: PUU's data on member households, including livestock ownership; information on Social Passport holders available at *ayil okmotu*; and qualitative assessment of households' poverty and vulnerability situations. Focus group discussions with target groups will inform PUU representatives the groups' opportunities for and constraints to value chain participation, which will be reflected in the Value Chain Business Development Plan (VCBDP).
- 6) Value Chain Business Development Plans (VCBDPs) prepared by LEs will be assessed by Selection Panel against a set criteria, which includes positive income impacts to smallholder livestock farmers (suppliers), a number of the project primary beneficiaries to be reached, including the poor ones, potential for job creation, especially of the youth, and inclusion of women.
- 7) Training on animal health and good farming practices will give priorities to poorer livestock farmers and female members within the livestock farming households. PUUs, which are included in the pre-selected value chains, will take the lead in identifying the participants representing these groups with the support from ARIS. Training modules will be developed taking into consideration specific challenges of poorer livestock farmers as well as women's roles in animal husbandry.
- 8) The Project will work with the EBRD's programme for entrepreneurship skills development in order to promote the employment of rural youth in agribusinesses. EBRD's Business Clinic provides professional business training to interested and promising youths. PUUs and ARIS

⁵² Groups of interested producers will be selected and receive project support in the same modality as set out in Component 1.

will jointly identify such youths – both male and female – in the communities for their possible inclusion in the programme.

21. The above mentioned tools and measures will be clearly spelled out in the Project Implementation Manual. Project M&E will be designed in a way that captures detailed information on the number of beneficiaries in different categories.

22. A Grievance Redress Mechanism (GRM) will be established to tackle unintended violation of Project rules and procedures. This mechanism will be used to address, and act upon, issues of serious elite capture at the community level.

Gender Strategy

23. The ATMP will follow the LMDPs' approach to gender mainstreaming through implementation of an action-oriented gender strategy specifically designed for the Project. The gender strategy of the ATMP will be based on the lessons learned from the LMDP that women's roles in the livestock sector are as important as men's, but their equal participation in the livestock sector, especially production, needs to be facilitated through a set of specific supporting measures. Looking at value addition and marketing opportunities of livestock products, the ATMP's gender strategy will go beyond production, and address the following opportunity areas which the Project will open up for women:

- focus on economic empowerment of women, especially through identification of non-traditional livestock products which will primarily benefit female producers and processors;
- promotion of women's formal employment especially at higher levels of the value chains (agribusinesses, retailing, etc.) under no discriminatory wage conditions;
- development of female leadership in the industry and support to 'gender champions' in Platform for Public-Private-Producers Partnerships; and
- active communication campaigns on new and enhanced roles of women in livestock value chains.

24. The table below indicates proposed actions and outputs in relation to the Project supported activities designed to ensure women's equal participation, development of their capacities, building gender awareness among all stakeholders and creating additional opportunities for women.

Project Activity	Gender Mainstreaming Action	Output
Component 1		
Selection of project supported value chains	Value chain gender assessment (assessment of women's roles at different stages of the VC; analysis of opportunities and constraints for women's participation and inclusion)	Inclusion of the gender assessment result in the descriptions of selected VCs.
	Identification of 'short' value chains with potential for women-centered value-addition and marketing	Inclusion of those products in the list of potential VCs supported under the project
Value chain partnership formulation	PUUs in partnership with LE will undertake, with the help from ARIS and as part of target group selection and consultation, focus group discussions with female producers to assess their opportunities and constraints	PUU representatives will become fully aware of the importance of inclusion of women and special attention, if any, female producers would require
Preparation of VCBDPs	VCBDP includes a gender action plan on the basis of the above assessment at PUU level	Gender action plan as part of VCBDP
Selection of VCBDPs	VCBDP criteria includes a proposal to increase female labour force participation at various stages of the VC; LEs with innovative labour saving technologies with expected benefits to women will be positively considered	'Gender' scores (female labour force participation, labour saving technologies, etc.) will be one of the factors to be considered for VCBDP selection

Training to producers on improved livestock husbandry, health, nutrition and hygiene	Selection of participants will be led by PUU with facilitation of ARIS to ensure strong presence of women	At least 40% of the trainees will be women
Provision of grants to groups of supplying farmers for aggregation	Inclusion of women in the groups and support for women's groups will be promoted by PUUs; grant proposals will provide sex-disaggregated membership information	At least 40% of the suppliers to receive grant will be women
Platform for Public-Private-Producers Partnership Development	Terms of Reference of contracted service provider who will guide the process of partnership strengthening will include gender aspects; all activities hosted in the process will address relevant gender issues and ensure women's participation; members of Platform Coordination Committee will receive gender training from ARIS or any other qualified institutions/individuals; membership of the Committee will take into consideration adequate gender balance and representation by establishing a thematic working group on gender	Participants of the consultative and learning process of the Platform will be capacitated to understand gender-based opportunities and constraints in the livestock sector; gender mainstreaming will be prominently featured in all work to be led by the Committee.
Component 2		
Support to innovative financial products	Proposals for innovative financial products will address relevant gender issues in the product design (such as risks of gender-differentiated outreach and client base), and incorporate gender mainstreaming actions.	All financial products which receive project support will not be biased against women

25. The Project will support activities on awareness building and capacity development on gender mainstreaming, targeting all key stakeholders. Modules and messages will be developed to address specific gender challenges and opportunities of different stakeholders. It is proposed that cooperation with other actors active in gender advocacy and mainstreaming, and behavioural change communications, such as UN Women, will be explored.

26. Gender-responsive Annual Work Plan and Budget (AWPB). The ATMP will pay special attention to ensure that a gender-responsive budget is in place. The M&E and Gender Manager (who is already in place in the APIU under the ongoing LMDP), in consultation with the Value Chain Coordinator and Rural Finance Coordinator, will integrate gender-responsive budgeting into the AWPB preparation process, reflecting the requirements to implement gender action plans.

27. A gender checklist is contained in Appendix 2, Annex 1 and a targeting checklist in Appendix 2, Annex 2.

Annex 1. Gender Checklist

Key Issue	Design Response
<p>1. The project design report contains – and programme implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each programme activity from the gender perspective to address any unintentional barriers to women’s participation.</p>	<p>Gender differences are analyzed, and the analysis provided the basis for proposed project activities. The design has taken into consideration women and men’s roles, constraints and needs in livestock production and marketing.</p>
<p>2. The project design report articulates – or the programme implements – actions with aim to:</p> <p>2.1 <i>Expand women’s economic empowerment through access to and control over productive and household assets;</i></p>	<p>ATMP activities are designed to expand women’s economic empowerment by supporting livestock products, which will particularly benefit women, promoting women’s employment in the livestock industry and support to female leadership.</p>
<p>2.2 <i>Strengthen women’s decision-making role in the household and community, and their representation in membership and leadership of local institutions;</i></p>	<p>Awareness building will emphasize women’s roles in all stages of livestock value chains. Community mobilization will be facilitated by ARIS who have good track record on gender mainstreaming and can engage qualified human resources for gender-sensitive analysis and facilitation. Farmer training will be designed to enhance women’s technical and entrepreneurial skills and increase awareness about their roles and opportunities.</p>
<p>2.3 <i>Achieve a reduced workload and an equitable workload balance between women and men.</i></p>	<p>ATMP will support aggregators and other value chain actors who will promote innovative labour saving technologies.</p>
<p>3. The project design report includes one paragraph in the targeting section that explains what the programme will deliver from a gender perspective.</p>	<p>ATMP’s gender strategy puts gender mainstreaming and economic empowerment of women at the centre, and elaborates key pro-women actions and outputs. Project M&E will track gender-disaggregated data.</p>
<p>4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant programme components.</p>	<p>The design report outlines key elements for gender strategy operationalization.</p>
<p>5. The design document describes - and the project implements - operational measures to ensure gender- equitable participation in, and benefit from, project activities. These will generally include:</p>	
<p>5.1 <i>Allocating adequate human and financial resources to implement the gender strategy</i></p>	<p>The project cost includes activities proposed to implement the gender strategy.</p>
<p>5.2 <i>Ensuring and supporting women’s active participation in project-related activities, decision-making bodies and committees, including setting specific targets for participation</i></p>	<p>Participation and inclusion of women underlies all project activities. Specific targets have been set for women’s participation.</p>

Key Issue	Design Response
<p>5.3 <i>Ensuring that project/project management arrangements (composition of the programme management unit/programme coordination unit, programme terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns</i></p>	<p>The Project management will rely on the existing structure for the LMDP, with APIU and ARIS including human resources in charge of gender, which reflect importance of gender aspects and can respond with necessary actions.</p>
<p>5.4 <i>Ensuring direct project/project outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited</i></p>	<p>Female livestock producers will be directly reached and included in all aspects of project interventions, including community mobilization and capacity building actions.</p>
<p>5.5 <i>Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue</i></p>	<p>Strategic partnerships to be sought include those with: EBRD on youth employment, including women; and UN Women for advocacy.</p>
<p>6. The project's logical framework, M&E, MIS and learning systems specify in design – and programme M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.</p>	<p>The ATMP will incorporate a gender-sensitive M&E system, which tracks gender-disaggregated data and information. TORs of baseline, mid-term and end line studies will ensure inclusion of gender-related information and data. The Project Logframe indicators are gender-sensitive and sex-disaggregated.</p>

Annex 2. Targeting Checklist

Key issue	Design response
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	ATMP's primary target are smallholder livestock producers, particularly poor families and women.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences? (matrix on target group characteristics completed?)	The Project's primary target groups have been identified, and descriptions of their socio-economic characteristics, assets and livelihoods are provided.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence? (matrix on analysis of project components and activities by principal beneficiary groups completed?)	Livestock are a key livelihood activity for smallholder farmers, including poor ones. The vast majority of milk and other livestock products are sourced from smallholders. Smallholders' interests in expanding production and improving quality for better and sustainable incomes are demonstrated under the LMDP (I&II).
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, involving some or all of the following measures and methods:	Targeting strategy is presented in Appendix 2.
4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based programmes or programmes, geographic areas (and within these, communities) with high concentrations of poor people	The Project will have national coverage, including oblasts with high level of poverty incidences.
4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households	The ATMP will select value chains which are participated by a large number of smallholders and which will have positive downstream impacts to producers, particularly to poor households. Women's participation will be facilitated by specific measures, such as selection of non-traditional products, which benefit women. The Project will promote the employment of youths by facilitating their participation in professionally run entrepreneurship skills development courses.
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	Livestock production is predominantly led by smallholder farmers.
4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power	Community mobilization at the PUUs will be facilitated by the experienced service provider (ARIS), who will analyse socio-economic situations and local dynamics, and create an enabling environment of participation of those social groups, which are disadvantaged in participating in decision-making and access to information, such as women and poor families.
4.5 Enabling measures – to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building	Value chain participants, including aggregators, traders and retailers, will be facilitated to work with smallholders and engage them in productive partnership. They will be also supported to incorporate business models and practices, which adhere to social and environmental accountability, including gender equality and empowerment.

Key issue	Design response
4.6 Attention to procedural measures- that could militate against participation by the intended target groups	The Project builds on successfully implemented measures of the LMDP (I&II) to ensure the participation of intended beneficiary groups and act on any procedural issues, as they emerge and/or notified, which may hinder participation of target beneficiary groups. Such measures combine community mobilization led by qualified and experienced facilitators, and high level of awareness and understanding at central-level agencies about IFAD's target groups and approach to their inclusion. The Project will incorporate a grievance redress mechanism to prevent elite capture.

Appendix 3: Country performance and lessons learned

A. Background

1. IFAD has financed five programmes and projects in Kyrgyzstan since 1995 with a total value of USD 133 million, investing a total of USD 72.4 million of IFAD funds. With this portfolio IFAD has reached a total of 458,000 households, focusing on the poor smallholders in the livestock sector. After Kyrgyzstan's independence in 1991, fragmentation of responsibilities over pastureland between different levels of government authorities provided ample opportunity to wealthy and influential farmers to acquire exclusive access rights to the most productive pasture areas. This led to over-grazing of winter pastures near villages, reduced attention by communities to the maintenance of vital pasture infrastructure, and under-grazing of summer pastures, leading to degeneration of pasture composition and quality. In response, the IFAD projects supported a pasture governance reform that sought to address these issues in a systemic manner. This culminated in the passing of the Pasture Law of 2009, which laid a legal foundation for decentralized community-based pasture management, including community-based institutions for governance. Such institutions comprise Pasture Users' Unions (PUUs) and their specialised sub-committees for pasture management and animal health.

B. Recent portfolio and performance

2. Under the **Agricultural Investments and Services Project** (AISP; 1 July 2009–30 September 2014) PUUs were established across the nation. This went hand in hand with policy dialogue and support to the government for development and adoption of an adequate legal and institutional framework for governing the management and use of pastures and veterinary services. The objective of the AISP was to improve the institutional and infrastructure environment for farmers and herders, with a strong emphasis on the livestock sector. The aims were to increase the productivity of farmers, particularly livestock farmers, and reduce animal diseases that have an impact on public health, such as brucellosis.

3. The AISP was assessed by IFAD's Independent Office of Evaluation (IOE) in 2015. According to the report, the relevance of AISP was high with respect to the country's needs, sectoral context and beneficiary needs. It achieved remarkable impact on social capital and empowerment. The project supported the organization and capacity-building of community-level institutions (454 Pasture Users Unions with pasture committees), with satisfactory representation of smallholders in pasture committees, resulting in better organisation of pasture management. The IOE Report also noted a strong impact on institutions and policies around pasture governance reform. At the same time, there were areas where the project impact on institutions and policies was not realized to the expected extent, such as veterinary services and agricultural support services to farmers. As a result of the latter, awareness production quality management among farmers is low.

4. Currently IFAD has two ongoing projects in Kyrgyzstan, the **Livestock and Market Development Programme** (LMDP) I and LMDP II for a total IFAD investment of an USD 21 million loan and an USD 21 million grant. These continue the support to PUUs through a participatory planning approach focusing on pasture and livestock development; and provide support to private veterinary practitioners, and to the national health programme to combat major livestock diseases. The LMDP II with support from the Adaptation for Smallholder Agriculture Programme (ASAP) Trust Fund also supports the creation socio-economic resilience by reducing the risk of income loss caused by climate change.

5. Observations of the supervision missions for the LMDP I indicate consistently that there is an improvement in livestock productivity in the project communities. Over the past 3 years, milk yields are up on average from 4-5 to 6-7 litres per cow/day; and weight gains for cattle bred for meat are up from 280 kg to 300 kg prior to slaughter. This is attributable to the combined contribution of interventions under the AISP and LMDP I, most notably improved access to remote pastures and

water; and a reduction in disease. In regard of zoonotic diseases the number of people diagnosed with brucellosis has been reduced from 2,296 in 2012 to 678 in September 2015. This translates into estimated USD 8.5 million economic revenues (reverted medical treatment expenditures or reverted economic losses). In view of these increased impacts there is a growing realization that access to remunerative markets is needed for farmers to turn this into higher incomes, and in order for the livestock sector to contribute effectively to improved nutrition and food security beyond producer household level.

C. Lessons learned and best practices

Policy and pasture management reform

6. Pasture management reforms in Kyrgyz Republic started as a measure to devolve management responsibilities to local governments and communities due to inability of government to promote sustainable resource management practices and ensure effective management. The AISP facilitated this major management transfer of vast pasture resources from central and provincial/district level administration to the level of local governments and further to resource users.

- The major change in policy was possible in part thanks to the political economy for executing such change at the national level. An effective national champion in the form of the Pasture Department Director was able to push for the changes in the system and secure political support sufficient to pass the legislation. At the same time, many changes occurred during a period of political instability, which weakened the power of local administrators with vested interests in the previous system for managing pastures. For large-scale reform in Kyrgyzstan with weak institutions and unstable political situation it is a key to have a strong and committed champion.
- Policy initiatives in support of the smallholders in the livestock sector need to be linked to social targets, such as increased access to pastures, economic factors such as improved animal productivity and profitability (in addition to increased number of livestock), and environmental targets, such as improved areas of pasture and increased areas under sustainable use.
- The new pasture law is widely seen as a codification of best practice in rangeland and pasture management. The law has received considerable attention and interest from other countries in the region. Community Development and Support Officers working for the LMDP I conducted an institutional assessment of 124 PUUs with more than 10,400 people, including more than 3,100 women. The results showed that majority of PUUs are progressing well and the beneficiaries positively assess their performance.
- Experience from LMDP 1 indicates that the dynamics of elite capture, lack of inclusion, and non-responsiveness has the tendency to seep into the PUUs and particularly the PCs when active community participation is not upholding accountability. The position of the PC chairman when unchecked may in the long run lead to abuse of power. At the same time, ARIS's experience and other analogous community efforts demonstrate that procedures can be put in place to prevent this: decision making procedures must be kept transparent, and appropriate financial management and accounting practices must be enforced.
- The livestock sector is considered a male domain although women play an active role in both production and marketing. Customary laws and social norms tend to keep women's roles and access to resources secondary to men's. Women's involvement in collective decision making on pasture management is limited as evidenced in LMDP 1 by low level of women's representation in PCs. In order to address gender and ensure women's meaningful participation, efforts are needed to address specific problems and opportunities, which are of significance to women.

Production and processing

7. Kyrgyzstan has 380 thousand dairy farms and produces 1.5 million tonnes of raw milk annually, almost entirely by smallholders. With the commercialization rate of just 10 percent at a farm-gate⁵³, the growing dairy industry has a major demand for milk that rural communities could satisfy. As for beef, production is around 102 million tonnes annually, roughly half from small households. However, the current biosecurity, animal productivity and food safety of the product moving along the supply chain does not allow to unlock this potential.

- There is a significant untapped potential in livestock as an income source for smallholders: rearing traditions and prevailing mentality are not naturally conducive to optimize the income generated from livestock. There is a general perception among most smallholders that a milking cow is rather considered as a valuable asset for family nutrition than an income generating production unit. The expected production increases from the improved pasture management – already witnessed by on-going supervision – will lead to increased surplus, which in turn will lead to an ever increasing number of smallholders learning to earn income from livestock. In IFAD's experience such a transition will, however, require intensive support to profitably link smallholders with the value chain. To mention the key concerns, first, the smallholders will need improved financial literacy in order to improve their decision making in commercial dairy primary production; second they will need to cooperate to improve their milk quality collectively and submit to controls; third they will need to improve new negotiating and collective bargaining capacity when cooperating with a commercial partner to receive their fair share from the surplus generated by improved quality of produce.
- The main difficulty in linking the farmers in profitable **dairy value chains** is milk collection and cooling. Milk collection and cooling centers are few, and most of the milk is collected by roaming middlemen with poor quality control and monitoring systems. Collectors' milk quality check is limited to some organoleptic evaluation (mainly looking at water addition and acidity). Readiness for quality control at the plant is generally also poor. Evidence from other donor programmes that have sought to improve the quality of livestock produce emphasizes the importance of channelling support to farmers with close involvement of the processors that are the immediate purchasers of the primary produce. This will facilitate the formulation of a set of appropriate standards to farmers by which the processors wish them to abide; ensure commitment by processors to the standards to which the farmers are trained and setup of suitable monitoring arrangements case by case. The experience with **middle-men** in dairy value chains is mixed and indicates that the options and opportunities for efficiently organising logistics are many and case-specific. On one hand, while quality control by middle men remains poor they also often cut a margin that leaves little profit for farmers. On the other hand, middle-men are typically the preferred sourcing option by processors who see them as providers of a service that they are themselves unable to organise efficiently and at a tolerable cost. Moreover, evidence from other donor programmes suggest that involvement of middle men can result in good prices for farmers in cases where a sufficient amount of middle-men leads them to compete for the produce.
- Poor productivity of livestock is partially due to the poor **maintenance of livestock breeds**, and limited use of breeding services by smallholders. This is due to the slow progress in the build-up of a network of private veterinary services to replace the long defunct maintenance system from Soviet times. Related with this, there is low demand by smallholders for breeding services, the economic value of which is not appreciated or understood. In IFAD's experience, there are however communities that, as a result of awareness campaigns have come around to financially support the start-up of veterinary services in their communities so as to have better access to services. A future project should invest in more awareness creation and capacity building.

⁵³ Based on 2014-year data. Estimated as a share of the surplus milk produced that has been actually sold.

- Income generated from fine **wool production** has increased as of lately, which has directly translated into wide interest among farmers to breed the fine wool sheep. However, the processing industry is poorly developed, forming an immanent bottleneck for future development of the sector. The key difficulty faced by processors is their poor capacity to differentiate wool parcels on fibre quality and, consequently, on price.
- **Poor animal health situation and limited access to veterinary services** are a major limitation of further livestock sector development in Kyrgyzstan. Diseases and parasites negatively impact animal productivity and human health. In addition, the presence of animal diseases causes great economic losses to rural poor representing a large group of the region's livestock owners and strongly affects their ability to trade on national and regional markets. In IFAD experience, successful animal disease control requires intensive public awareness efforts and strong logistical coordination at community level. The successful brucellosis control program implemented under AISP demonstrated the importance of intensive public awareness and community level planning of vaccination campaigns with private veterinarians.
- An Eurasian Economic Union veterinary inspection mission report has assessed the livestock sanitary system as unsatisfactory. The mission recommended denying export of any live animals or non-processed meat or milk and dairy products into the territory of the EAEU from the Kyrgyz Republic, negatively affecting incomes of livestock smallholders. This is not because due to outbreaks and uncontrolled diseases but primarily because **the livestock sanitary situation is either unknown or undocumented**. Thus, there is a clear need to strengthen both key public and private sector arms of the Kyrgyz Veterinary Authority which facilitate livestock commodity trade and safe food. Support should go to following key areas: Technical support to the State Inspectorate for Veterinary and Phytosanitary Security or State Inspectorate; Establishment of an Accredited Veterinarian System; Animal identification support for the selected dairy and fat-lamb meat value chains; Rehabilitation of regional veterinary diagnostic laboratories; and Rehabilitation of internal border posts.

Rural Finance

- Generally, Kyrgyzstan is characterized by relatively low levels of financial inclusion. For example, account ownership in the country is 18.5% of adults as compared to 51.4% in Eastern Europe and Central Asia (ECA) and 42.7% in lower middle-income countries. However, **in the area of credit usage the country is ahead** of its peers – 13.5% of adults used credit in the past year while this figure was 12.4% for ECA and 7.5% for lower middle-income countries. Credit usage is even higher among rural residents (14.3%) and the poorest 40% (14.4%).
- It appears however that there may be a **financing gap in the area of medium-sized and large loans for agricultural producers and processors**. For instance, according to the Ministry of Agriculture and Melioration, there is a need for replacing old agricultural machinery and equipment whose amortization level is about 90 percent. In addition, over 15,000 new machinery and equipment units are needed. The investment necessary for this is estimated at the level of USD 500 million.
- **There are several donors currently engaged or planning to engage in support for rural agriculture financing** in Kyrgyzstan, including through the provision of credit lines of significant volumes (for example, the funding available from the Russian-Kyrgyz Development Fund alone equals to some 37 percent of the total outstanding loan portfolio of the whole banking sector). Based on the above, there will be no value added in IFAD-funded credit lines, and as such these will not be provided. Instead, IFAD should partner with existing funders and financial service providers (FSP) with the goal of linking ATMP beneficiaries with them to benefit from their credit resources.
- Experience from the Agricultural Support Services Project (1998-2003; IFAD cofinancing USD 9 million) suggests that it is possible to target credit towards the poorest and most vulnerable by appropriate targeting mechanisms. Such criteria can include geographical targeting of poor and

remote communities; targeting based on income levels; and using group based collateral as opposed to physical collateral.

- Kyrgyzstan is characterized by very low levels of **financial literacy**, per the World Bank/Standard&Poor's Rating Services Global Financial Literacy Survey (2014): only 19 percent of adults were able to respond correctly to questions assessing basic knowledge of four fundamental concepts in financial decision-making: knowledge of interest rates, interest compounding, inflation, and risk diversification. To compare, the share of financially literate adults in Uzbekistan is 21 percent, in Russia – 38 percent, and in Kazakhstan – 40 percent.

Appendix 4: Detailed project description

Project description

Project area and target group

1. The Project has a national coverage and adopts demand-driven approach. ATMP's primary target are smallholder livestock farmers who participate in and benefit from improved value chains. They comprise: (i) poor livestock farmers (those who typically own up to 2-3 cattle and 8-10 sheep/goats, i.e. up to 5 LUs); (ii) female members of livestock owning households, including female heads; and (iii) other smallholder livestock farmers. The poor livestock farmers (the first category) are most likely Social Passport holders. The other beneficiary groups consist of: (iv) agribusinesses; (v) input suppliers and service providers, including private vets; (vi) national scientific and academic staff; (vii) women-entrepreneurs; and (viii) the rural unemployed. For the latter, the Project support is expected to create greater decent employment opportunities in relation to on-farm and processing activities of targeted value chains. Particular attention will be given to the participation of women and youth, individually and in groups.

2. The ATMP will work with livestock value chains (see the definition) and provide holistic and coordinated support to all the actors within a supply chain in a way to improve the chains' overall performance. The Project will invite all Kyrgyzstani agribusinesses and other entities qualifying for the role of a Leading Entity and who are willing to develop sound business models under productive partnerships with their suppliers. Smallholder livestock producers, who are the Project's primary target group, will be captured in each selected value chain in order to enhance their inclusiveness and improve their returns from livestock thanks to the direct contractual arrangements with LEs. ATMP's targeting strategy will therefore incorporate the principles of smallholders' inclusiveness. PUUs, facilitated by ARIS and building on the positive experience of the LMDPs I and II, will play an active role in identifying and mobilizing farmers at the community level in a transparent and participatory manner, and will ensure to avoid the elite capture of the Project opportunities and benefits.

Development objective and impact indicators

Project development goal/objective

3. The ATMP **Goal** is to contribute to increased incomes and enhanced economic growth in pastoralist communities. The **Development Objective** of the Project is: improved access and integration of smallholder livestock farmers with remunerative markets for their products, leading to improved and equitable returns.

Impact indicators

4. Project implementation will be guided by the project's results management framework. Key performance indicators at Goal level are: (i) 28,000 rural households in the Project area increase their index of household assets ownership by 10% (disaggregated by gender, poverty, farm type and youth categories); and (ii) At least 10% reduction in the prevalence of child malnutrition, as compared to baseline⁵⁴. Key performance indicators at the development objective level are: (i) The value of livestock products sold by targeted farmers in the Project area increased by 30%; and (ii) 2,800 decent jobs created (40% women) through livestock-related farm work/processing capacity expansion and new enterprises.

Components/Outcomes

5. The Project's investments and activities will be executed through three components in addition to Project Management: **Component 1. Livestock Value Chains Development;**

⁵⁴ Results and impact management system-RIMS anchor indicator

Component 2. Livestock Value Chains Financing; and Component 3. Upgrading the Kyrgyz Livestock Sanitary System.

Component 1: Livestock Value Chains Development

Component’s Rationale, Approach, Outcome and Outputs

6. This Component, the outcome of which will be “*capacity for sustainable, efficient livestock production, processing and marketing enhanced*” will support efficient linkages and partnerships amongst livestock value chain actors, improved access to modern technology and Good Agricultural Practices with a specific focus on cold chain management and traceability. This outcome will be measured by the following indicators: (i) at least 180 productive partnerships are sustainably operating; and (ii) at least 10 percent increase in gross margins generated by participating farming households from their sale of live animals and/or livestock products within the Project-supported value chain. The outputs of the Component together with the accompanying indicators are outlined below:

Output 1.1 Livestock Value Chain Stakeholders’ capacity is built	<ul style="list-style-type: none"> ▪ At least 100 VCDBPs prepared for financing by participating financial institutions ▪ At least 34,000 beneficiary farmers and livestock husbandry workers trained in improved livestock husbandry, animal health, nutrition and food safety (at least 30% women and 30% youth); ▪ At least 100 processing/aggregator enterprise owners, enterprise managers, and production managers trained in business, processing technology, marketing and value chain management ▪ All Project’s management, participating financial institutions and private sector staff trained in gender and poverty awareness ▪ At least 15 innovative livestock production or processing technology testing and development programmes implemented
Output 1.2 Product aggregation enhanced	<ul style="list-style-type: none"> ▪ At least 26,500 new households involved in producer groups in value chains ▪ At least 250 grant packages financed
Output 1.3 Platform for PPPP and KM operating sustainably	<ul style="list-style-type: none"> ▪ National Platform for PPPP and KM with broad, gender equitable livestock value chain representation (at least 30% women) meeting systematically at regional and national levels ▪ At least 10 KM products developed and disseminated

7. The Component will promote increased incomes of animal owners through strengthening of the linkages between raw material producers and agribusinesses and the improvement of the governance within the chain. The component intends to build viable business models (productive partnerships) and develop excellency in habit and trust among value chains actors. The ultimate objective is to demonstrate that running the business models compliant with the international standards is *sustainable* and *credit-worthy*.

8. The concept of **value chain champions** referred in this document as a Leading Entity, reflects to the willingness of a legal entity to invest time and resources (including non-economic resources, intellectual contributions, etc.) to increasing value chain competitiveness in a way that enhances benefits to small- and medium-scale producers. These value chain champions are typically larger, financially stronger or more innovative firms, but the leadership can also come from a public-sector association or even a well-organized, skilled group of producers. Effective leadership necessitates transparent relationships with suppliers, a commitment to addressing constraints to smallholders' participation in the value chain, and a willingness to work with other stakeholders to solve industry-wide problems. The quality and strength of these drivers of change cuts across competitiveness, impact and cross-cutting issues.

9. **Value chain upgrade:** demand-driven support services and knowledge will be provided to all actors of the supported value chain. These include co-financing of cold chain infrastructure, input

supplies and advisory services in support of on-farm/plant management. Efforts will be focused in reducing the cost of production (for example, by improving birth rates and reducing mortality, organizing a joint feed production unit), minimizing transaction costs (e.g. bulking vaccination visits), which will eventually result in higher returns for farmers and strengthen raw material procurement system of a LE.

10. **Provision for scaling-up.** The Project will accumulate knowledge during implementation in order to guide future decisions on scaling up. The stronger the value chain champion is, the greater the likelihood that the key drivers of the scaling-up process will be able to lead and sustain the efforts beyond the Project. The economic and financial benefits must be sufficiently attractive to drive expansion and sustain the initiative in the long term.

11. The ATMP adopts a comprehensive approach to *food security, climate change adaptation* and *gender mainstreaming* along the value chains. This is translated in a series of interventions looking downstream the value chain (support to greater animal feed market to reduce the grazing pressure) up to upstream issues related to marketing of the final products and reducing losses. Gender sensitivity is secured by the prioritized value chain *per se*: raw milk and dairy production as well as fine wool processing are largely driven by women and represent valid market opportunities for female entrepreneurs. Indicatively, about 90 percent of farmers specialized in beef production are males.

12. The Project will take into account the demands of *specific market segments*. For instance, Halal products, non-cattle dairy, yak meat, organic premium meat cuts, etc.). To build market intelligence within the chain, the ATMP will provide for the Business-to-Farmers dialogue platform (Sub-component 1.3).

13. Project interventions are *market-driven*: a Rapid End Markets Assessment⁵⁵ has been carried out for the purposes of Project design, and interviews with domestic food retail chains, HoReCa representatives, processors and dairy farmers have highlighted a range of needs that the project could support. These go from milk testing equipment for dairy plants and milk collection infrastructure, elaboration of new products (e.g. apiculture, yak wool) and marketing strategy to high demand for year-round supplies of quality milk and overall dairy farming upgrade.

14. Client tailored loans and knowledge products offered by the Project will serve as *incentives to catalyze the change behaviour* that support value chain competitiveness. In particular, study tours, foreseen under Sub-component 1.1 to countries with similar climatic conditions will provide for an informal knowledge exchange among professionals of the sector.

15. *Support services* are an integral part of the successful project implementation. In fact, value chains do not operate in a vacuum; businesses depend on the services that keep them functioning and competitive, from agricultural inputs and cold storage or collection facility to transportation systems, electricity, sewage and communications.

16. The challenge for the Kyrgyz agriculture in general – and for the livestock sector in particular – is to *broaden and strengthen the raw material supply* and *bulk up the produce* to allow the national food industry to continue to grow and seize more market opportunities for the country's economy.

17. Analysis⁵⁶ of the production structure shows that small- and medium-size farmer are the major suppliers of raw material and *mainstreaming their supplies into the formal marketing channel is crucial*. In fact, most of the Kyrgyzstani smallholders are *unlikely to grow into business farmers* as land is a limited resource and even better off farmers willing to expand can't access more land for fodder production and rent/build pasture shelters (*koshari*), and there are legal limitations to build the new ones. In addition, crop production is competing for land, and dedicating more land for animal feed production is unlikely. Therefore, interventions within the framework of the ATMP need to support smallholders by building their capacity to (i) produce *marketable products* in stable quantities and of consistent quality, (ii) catalyze and support the formation of *producers groups*, and (iii) facilitate the

⁵⁵ Rapid End Markets Assessment Study, IFAD/FAO, February 2016.

⁵⁶ Rapid End Markets Assessment Study, IFAD/FAO, February 2016.

establishment of *strong linkages* and *trust* between farmers and agribusinesses. Adoption of a model where smallholders and corporate actors of the value chain are *equally* empowered and encouraged to produce more and better will be key for successful scaling-up.

18. The Kyrgyz processing companies have to deal with a very limited in size domestic market, which provokes the establishment of small-scale businesses usually offering a limited product line of a poor quality. To cope with heavy fixed costs and occupy employees, small-scale processing units tend to expand their business lines. For example, a small-scale dairy facility would usually run a confectionary shop or a fruit and vegetable preserves line. The scale of such businesses is clearly limited, so is their competitiveness. It is therefore suggested for the ATMP to support a *champion-driven value chain development* promoting higher competitiveness, export-orientation and credit-worthiness of all actors along the selected value chains.

Description of Component Activities

19. **Upgrading actions** will include actions taken by producers, processors, input suppliers, and traders at various points in the value chain to increase future productive capacity and competitiveness. Upgrading actions can be divided into three groups:

- Investment in *physical capital*: expenditure of money to acquire plant, equipment, and inventories;
- Investment in human capital: expenditure of time, effort, and money to learn and apply better ways of producing, processing, and marketing the commodity or commodities concerned;
- Investment in new and better business relationships: expenditure of time and effort to create and maintain new and more profitable business relationships that offer improved incentives to producers and foster growing trust among those involved in the business relationships.

20. The ATMP will address a series of problems/limitations of livestock value chain development. These will involve:

- *Knowledge gaps* (e.g., improved feed cultivation/breeding techniques), which may be exacerbated by a low value placed on learning and pervasive mistrust that impedes the sharing of knowledge;
- *Market imperfections* (e.g., weak bargaining positions of farmers);
- *Inefficient technologies* (e.g., use of unselected and low-yielding seed) that may persist because of unstable or indiscriminating markets, making investments in improved technologies seem too costly or risky.

21. The Project will therefore partially finance physical investment. Efforts to improve knowledge, skills, and business relationships will also be financed by the Component outlined below.

22. **Subcomponent 1.1. Capacity Building of Livestock Value Chain Stakeholders** (US\$4.76 million). The activities under this Subcomponent will entail demand-driven capacity building and advisory services for the participants of the value chains led by the Leading Entities. An information campaign will be conducted at the Project start-up based by the Agribusiness Mapping exercise (Annex 3) conducted during the final design of ATMP and coupled by the Rapid End Market Assessment commissioned by IFAD to FAO (February 2016). The eligible entities qualifying for the role of a LE will be asked to submit short proposals to be assessed by the APIU against Project set criteria. Entities that are the subject of bankruptcy, criminal investigation, fraud, corruption or are in default of contractual agreements would be ineligible to participate.

23. Building on the results of the two earlier IFAD projects in the country, the ATMP will promote close collaboration between the Pasture Users' Unions (PUUs) and LEs. Towards this, producers and their groups will be mobilized through the suitable PUUs with support from ARIS. Suitability of a PUU is determined by primarily its willingness to collaborate with the LE, strong leadership of the PUU and stable power supply (in case of dairy chain). The Project will also adapt the experience gained under

the Livestock and Markets Development Project's Component 3: Diversification and market/value initiatives.

24. ARIS will assist in guiding the producers and their groups in adapting product specifications of the LE and will facilitate the dialogue between the farmers, service providers and agribusinesses to ensure the mutual understanding, respect and trust. Like in the LMDP, the Project will, through ARIS, conduct awareness and training campaigns so that PC/PUU members in the selected areas (where the selected VCs are located) understand the benefits of working together for aggregation of their products.

25. Once the LEs are identified, all the suppliers of live animals and raw material as well as involved service providers will be gathered to present the concept of a productive partnership, its modalities and benefits to farmers and all value chain participants. It is expected that at this point potential partnerships would be established/identified and the business proposals would be developed.

26. Selected proposals will be further elaborated by the Project-provided dedicated business advisory services facility (EBRD's SBS). The latter would assist LEs and the associated value chain participants to prepare bankable investment proposals for their respective value chains or Value Chain Development Business Plans (VCDBPs). The VCDBP analysis would include: (i) a situation analysis including a detailed assessment of expected smallholder participation; (ii) opportunities to upgrade; (iii) constraints to upgrading; and (iv) recommendations on what can be done practically and what instruments to use. The VCDBPs will incorporate all envisaged activities within the value chain, including associated capacity building. The VCDBPs will list the potential types of investments eligible for financing under the ATMP and each type of investment at key points along the value chain, i.e. Grant Project (GP) or Credit Project (CP), to be accompanied with a realistic business model/financial analysis. The VCDBPs will be ranked by the APIU against a set of criteria (see Annex 2). Following this criteria-based evaluation of VCDBPs, eligible packages might be subject to grant financing by the ATMP or submitted to Participating Financial Institutions (PFIs) that meet IFAD due diligence requirements (further details under Component 2). Sequencing of VCDBPs' implementation will be based on a first come - first serve principle.

27. Associated value chain capacity building activities, e.g. training of farmers or agribusiness staff/management, organizing farmers into groups, etc., would be financed directly by the ATMP. The development of a VCDBP would not be a guarantee of ATMP financing. VCDBPs would be ranked by the APIU against key Project indicators and only those VCDBPs meeting the minimum ATMP requirements would be used as a framework for preparation of individual Grant Projects or/and Credit Projects to be further presented to Selection Panel for GPs or/and forwarded to FSPs for consideration of CPs. The Selection Panel will validate the recommendations of the APIU for GPs financing, while it is solely PFIs' decision to whether finance or not to finance all or part of the CP private good investment. APIU's recommendations for GPs financing will be based upon assessments made against key Project criteria and in accordance with the PIM (the VCDBP and GP selection process is described in Annex 2).

28. The Subcomponent will also provide capacity building through training and on-farm demonstrations, piloting of innovative and climate smart technologies, targeted advisory services and exposure to the best international practices through the participation in study tours and trade fairs. Activities will be targeted at:

- *Smallholder/peasant farmers and their groups* on animal health, good farming practices including feeding, on-farm management with focus on planning, hygiene standards for raw material handling, financial literacy, business planning and management of collection centers and other forms of product aggregation for the improved market access and margin distribution upstream the value chain;

- *Aggregators* (milk, animals, wool, skins, honey) on food safety, raw material quality control, financial literacy, business planning, management of milk collection centers and other forms of product aggregation for generating the economies of scale;
- *Private veterinarians and zoo-technicians* on knowledge upgrade for animal health and biosecurity, new drugs, animal nutrition and artificial insemination;
- *Agribusinesses* on business planning, quality management systems, international food industry standards (ISO 22000 series, HACCP), preparation of company's testing laboratories for certification (ISO 17025), market prospecting for niche products;
- *Unemployed youth* in rural areas on vocational training, apprenticeship, and other capacity building supports, which will aim at equipping them with the skills potentially required by the upgraded livestock value chains (e.g. yak wool quality controllers, etc.).

29. The **training modules** vary across value chains and from one value chain participants' group to another. The approximate list of modules includes:

- *Dairy chains:*
 - Dairy Farm Management
 - Dairy Cattle Nutrition (Feed Evaluation and Formulation, Forages)
 - Raw Milk Quality
 - Dairy Science & Technology
- *Meat chains:*
 - Cattle/Sheep Farm Management
 - Ruminant Nutrition
 - Meat Quality
 - Meat Science & Technology
 - Pasture Management (build on the experience of LMDP)
- *All Agribusiness:*
 - Management & marketing
 - Financial management
 - Food safety
 - Metrological laboratories
 - Information Communication Technologies

30. **ARIS Facilitation.** The facilitation will comprise the recruitment, deployment and operation of the ARIS teams in the clusters where the selected value chains are located to enable them to facilitate the mobilization process, build capacity (mainly mentoring) and administer the associated grants. The Project provides financing to enable ARIS to carry out the various processes required to implement the range of activities largely at the PC/PUU level. The required services to be provided by ARIS – which amount to about US\$0.9 million – will be specified in a result-based agreement and provide for:

- *ARIS staff at central and regional level*, utilizing to the extent possible the ARIS staff that are already in place and experienced under LMDP with such work in the selected VC clusters
- *Technical Consultants*, comprising: Coordinator/Business Development, Business Planning and Disbursement Specialist
- *Social Fund Provisions* (17.25%), as part of the government requirement for employees
- *Local support*, comprising of up to 9 Community Development and Support Officers (CDSOs)
- *Operational Costs*, for field visits, vehicle hire and ARIS central/regional offices operating costs.

31. **Selection Panel** will be established by the APIU and composed by a minimum 7 but maximum 11 members, mainly from the private sector: representatives from the professional unions like Dairy Producer Association, Meat Producer Association, EBRD's SBS facility, Kyrgyz Veterinary Association (KVA), Republican Association of Pasture Users' Unions (RAPUU), ARIS, MoAM and possibly others.

Meetings of the Selection Panel will be held as needed, but likely quarterly when a reasonable number of Grant Projects is accumulated (not less than 10). The Value Chain Development Coordinator (VCD Coordinator) recruited by the APIU will be acting as Secretary of these meetings and will be taking a lead responsibility for assessment of the GPs according to the procedures described in the Project Implementation Manual (PIM). The VCD Coordinator will be supported by short-term international and national consultants (reviewers and advisers). Selection Panel's main role will be to validate the selection process of GPs against the PIM. The Project will cover costs for conducting the meetings of the Selection Panel. A description of the VCDBP process is contained in Appendix 4, Annex 2.

32. Appendix 4, Annex 1 contains TORs for the key staff, consultants and service providers.

33. Further, this Subcomponent will foster innovation and best practices based on the results of the applied research and the pilots, including those of the ongoing projects (e.g. fertilization of pastures soils with gluconite under LMDP) and will organize and made available all the knowledge available in the country in application to various livestock activities in one place. Cooperation with the Ministry of Health shall be foreseen to provide the consumer with the valid information on the benefits of consumption of the various animal products available in Kyrgyzstan (e.g. yak meat, non-cattle milk). Based on a Platform's priority needs identification process (Subcomponent 1.3), the APIU will establish a competitive applied research support programme to identify bottlenecks in the country's animal products industry. The Project would fund, inter alia, the participating institution's operational costs and field and laboratory equipment requirements, national and international TA, on-farm/enterprise technology testing and demonstration, farmer and scientist capacity building and experiential study tours and, where appropriate, scholarships for post-graduate student coordinators of participatory technology testing and demonstration activities. Technology testing and innovation needs would be identified annually over the first three project years. Dependent on the identified needs, technology testing and innovation programme agreements could be awarded for up to US\$100,000 and to 2 years' duration.

34. Depending on their nature, technology innovation sub-projects will be contracted to specialised technical institutions to deliver, or put to national competitive tender. The implementation of these technology innovation programmes will involve public-private partnership and extensive field testing and demonstration. Successful technology innovations will be compiled in technology packages for dissemination and support for new technology launch and operation. Possible technology innovation themes could include, inter alia: fodder variety testing and registration; fodder conservation technology for smallholder farmers; theileriosis control; use of lactoperoxidase; calf rearing using whey protein; animal feed quality and nutrition management; processing technologies for product diversification and quality control; and the demand assessment of the innovative livestock products on the Kyrgyzstani market and abroad.

35. Once technology needs have been identified and prioritised by Platform members, the APIU will prepare an invitation for public and private technical specialists, faculties and institutions to submit brief pro-forma-based proposals for their implementation. These will be evaluated by a panel of independent experts and APIU staff and international advisers against a set of criteria that will include: (i) an assessment of the applicants understanding of the constraint and capacity to address it; (ii) the extent of smallholder farmer and private enterprise engagement in the development of solutions; (iii) the level of engagement of post-graduate students; (iv) the likely financial benefit of the proposed solution(s); and (v) the expected environmental impact and any associated mitigation measures (further elaborated in the PIM). Successful applicants will then be invited to submit a detailed proposal, which will be negotiated with the APIU and form the basis of a contractual agreement.

36. Wherever possible, technology innovation testing and development will be done on farmer's fields and livestock. Farmers participating in such technology testing activities will receive free trial inputs, but will be expected to periodically make their farms available for farmer awareness training. Each technology innovation package will include a specific beneficiary knowledge sharing and capacity building programme, which will be closely monitored and assessed by the Project M&E

Specialist. Payments for the delivery of technology innovation programmes will be based on a set of agreed, time-based output-based milestones that will be identified in the contract. Failure to meet agreed delivery times/quantities could lead to financial penalties. Technology innovation contractors will be expected to self-monitor their performance and report on a semester basis. The Project M&E Specialist will conduct spot checks on contractor reported outputs/outcomes. All final research reports will be peer reviewed by national and regional specialists and final payments will only be made on the receipt of a satisfactory review.

37. **Subcomponent 1.2: Product Aggregation Enhancement** (US\$10.78 million). This Subcomponent aims to address the issue of insufficient chain infrastructure for raw products collection and their quality and safety control. The identified under Subcomponent 1.1 eligible investment packages will be co-financed as follows:

- *to drivers of change (largely agroprocessors and aggregators/traders)* – up to US\$100,000 on a 50% basis (i.e. up to US\$50,000 as a grant per investment package) - for the financing of collection and cooling centers, raw products testing equipment, small refrigerating trucks for milk/meat collection, access infrastructure;
- *to groups of supplying farmers* – up to US\$100,000 on a 80% basis (i.e. up to US\$80,000 as a grant per investment package) - for the financing of portable milking equipment, feed choppers and mixers, new feed crops varieties, animal sheds renovation, improved breeds, access infrastructure;
- *to private veterinaries and zoo-technicians* – up to US\$20,000 on 50% basis (i.e. up to US\$10,000 as a grant per investment package) - serving the selected value chains for the purchase of veterinary drugs/instruments and artificial insemination equipment.

38. The grants to beneficiaries would be channelled through ARIS in line with their pattern, i.e. type, phasing and implementation, determined by the respective VCDBPs. The beneficiaries would be expected to commit to the implementation and the achievement of the targets by signed agreements, which would envisage a phased financing of the grants against the clearly identifiable milestone indicators. Beneficiaries/groups would be responsible for managing the grants, while ARIS would administer the provision of grants based on its well-established modalities and procedures also applied in the LMDP but to be adjusted for the ATMP and described in the PIM.

39. **Sub-component 1.3. Platform for Public-Private-Producers Partnerships Development and Knowledge Management** (US\$0.31 million). The Project will host a platform for the exchanges among actors in the value chains for better and innovative integration of market demand into production models. For example, premium goat cheese and yak meat cuts for the HoReCAa sector, fine yak and merino wool for women groups. While the platform will provide an opportunity for all value chain actors to share experiences and concerns, it will also allow and create a space for the producers and buyers for a constructive dialogue on product specifications.

40. The ability of Kyrgyzstani animal products producers to compete in target markets can't be credibly assessed without a **deep understanding of buyer's needs** and position vis-à-vis competitions. Organization of quick research missions to the target markets should be one of the first ATMP activities and they have a great impact on the future direction of the Project. End-markets play key role in value chain growth and development, therefore it is recommended to adopt an iterative approach in value chain analysis, when end-markets analysis informs the supply-side assessment, and vice-versa until a clear picture emerges about the chain's strengths and weaknesses, external opportunities and threads, and development priorities.

41. A contracted service provider will, through a series of periodic meetings, progressively enable stakeholders to: (i) identify, discuss and assess livestock sector's constraints, priorities and build upon opportunities for investments; (ii) become conversant with "Public-Private-Producers Partnerships" business models; and (iii) develop value chain business and investment strategies. The organization of the regular thematic events and master classes at national level on livestock sector development issues is envisaged. Progressively, the Platform will engage the decision-makers at local, regional and

national levels with the aim of increasing their understanding of livestock development issues and supporting the development of a conducive regulatory and incentive framework for business development. The service provider will advise on a constitution and by-laws leading to the election of a Platform Coordination Committee, which will meet regularly to oversee the work of the Platform and its contracted service providers. The elected Coordinating Committee will elect its Chairperson. The APIU IFAD projects' Manager, VCD Coordinator, Rural Finance Coordinator and Veterinary Coordinator will be ex-officio members of this Coordination Committee. The APIU IFAD projects' Manager will be the Secretary for the Platform Coordination Committee and prepare brief minutes of all meetings.

42. It is expected that toward the end of the Project, the role of the Platform's facilitator will shift from the contracted service provider to local institutions to ensure the sustainability of the consultative and learning process. A possibility to shift this role to the Business Development and Investments Council⁵⁷ will be further investigated. The Project will also ensure that the linkage between the Platform and the Project M&E/KM functions for sharing data, knowledge and lessons learnt will be established.

Component 2: Livestock Value Chains Financing

Component's Rationale, Approach, Outcome and Outputs

43. The rural finance sector review in Working Paper 2 on this Component concludes that the niche of micro and small agricultural loans appears to be well covered by the existing lending programs of the government and commercial banks, and no additional loan funding may be necessary for this category.

44. While more research will be necessary to confirm this,⁵⁸ it appears that there may be a financing gap in the area of medium-sized and large loans for agricultural producers and processors. For example, one of the banks interviewed mentioned that it had very few loans in this category, and another bank noted that due to the limitations of the government-funded interest rates subsidies it is often not possible to reach this category with soft loans. The bank estimated there were some 20-30 medium-sized processors in the country in need of loans between USD 20,000 and 500,000 (the bank had no data on the needs of larger agricultural enterprises).

45. According to the Ministry of Agriculture and Melioration, there is a need for replacing old agricultural machinery and equipment whose amortization level is about 90 percent. In addition, over 15,000 new machinery and equipment units are needed. The investment necessary for this is estimated at the level of USD 500 million.⁵⁹ The need for agricultural machinery is partially being met by Ayil Bank's leasing program that has leased over 1,700 machinery units since 2011 and became the largest player in the leasing market, as described earlier. There are six other banks offering leasing services, but their aggregate share of the leasing market is small (about 6 percent).⁶⁰

46. There are several funders currently engaged or planning to engage in agriculture support in Kyrgyzstan, including through the provision of credit lines of significant volumes (for example, the funding available from the Russian-Kyrgyz Development Fund alone equals to some 37 percent of the total outstanding loan portfolio of the whole banking sector).

47. Based on the above, there will be no value added in IFAD-funded credit lines, and as such these will not be provided. Instead, IFAD will partner with existing funders and financial service providers (FSP) with the goal of linking ATMP beneficiaries with them to benefit from their credit resources.

⁵⁷ Established as a non-governmental public organization under the GOK with EBRD support.

⁵⁸ It appears there has been no comprehensive national market research done in Kyrgyzstan on the funding needs of the agricultural sector.

⁵⁹ http://agroinfo.com/wp-content/uploads/2013/05/Appendix_On_the_demand.pdf

⁶⁰ http://www.senti.kg/article/lizing_v_kirgizctane_utopiya_ili_realnoct

48. While no additional funding for credit lines seems necessary, there is a need to develop new innovative lending products for agriculture, in particular, targeting the needs of medium-sized and larger agricultural producers and processors – on whom FSPs have not been focusing.

49. Thus IFAD will ensure complementarity of its involvement in agricultural development in the Kyrgyz Republic by linking eligible project beneficiaries with FSPs to access credit resources and disseminating lessons learnt as a result of product development activities.

50. Innovative approach. Activities under the Component will be in line with IFAD’s approach to scaling up results⁶¹ – since IFAD’s interventions under Component 1 will leverage substantial financial resources of existing local partners (FSPs and development funding institutions). It should be noted that IFAD would strive to crowd in partners who otherwise may not engage in agriculture (for example, the Russian-Kyrgyz Development Fund that has no experience in agricultural lending but would be interested in getting engaged if assured of the quality of prospective agricultural borrowers). Through partnering with IFAD, these partner institutions will be able to gain experience and build capacity in working with agricultural projects, which will ensure the sustainability of results and the continuation of impact beyond the Project’s life.

51. The development of new innovative lending products for agriculture will also contribute to the scaling up approach: a small investment of IFAD’s funding of USD 0.69 million for the product development and piloting is expected to leverage much larger resources of local FSPs and development funding institutions as these products will be launched in the market using FSPs’ own funding.

52. Thus, the scaling up approach will be applied in two of IFAD’s main lines of business: rural finance and pro-poor value chains.

53. The primary objective of this Component will be to increase access to finance for medium-sized and large agricultural producers and processors where there is currently a funding gap by linking them with external credit lines (such the one of the Russia-Kyrgyz Development Fund). In addition, the component activities will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers.

54. The outcome this Component will be “efficiency and profitability along targeted smallholder-inclusive livestock value chains increased”, to enable livestock value chain actors to increase their investment in profitable livestock value chains through the provision of grants (under Component 1) and by linking them with external credit lines. In addition, the Component activities will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers. The outcome will be measured by the following indicators: (i) Portfolio at risk below 10%⁶²; and (ii) Commercial processors in Project area increase purchase of livestock and livestock produce supplied by smallholders by 30%. The outputs of the Component together with the accompanying indicators are outlined below:

Output 2.1 Increased access to external credit lines	▪ Value of gross loan portfolio at least USD 20 million by PY5
Output 2.2. Increased access to innovative financial products	▪ At least 10 innovative financial products developed and tested

Description of Component Activities

55. The Value Chains Financing Component will consist of two subcomponents as discussed below. It will be closely linked with the other components of the ATMP and satisfy the needs of project beneficiaries in loan financing through facilitating access to external credit lines.

⁶¹ See: IFAD’s operational framework for scaling up results, December 2015.

⁶² RIMS 1st level indicator

56. **Subcomponent 2.1. Access to External Credit Lines** (US\$25 million). No IFAD-funded credit lines will be provided as the needs of micro and small rural entrepreneurs and smallholder farmers are currently sufficiently met by the private sector.

57. The Project will partner with existing financial institutions/projects targeting agricultural development to link them with the agricultural producers and processors identified and assisted through Component 1. These partners may include (but are not limited to):

KfW, European Investment Bank and the Swiss Development Cooperation's project that will include a credit line to commercial banks to fund agriculture;

The Kyrgyz-Russian Development Fund with a capital of USD 500 million that can be used for any economic sector including agriculture.

58. The Project will sign a MOU with each of the partners outlining the eligibility criteria for prospective borrowers, which will be harmonized between the ATMP and the partners, as well as specific arrangements designed to link the Component 1 beneficiaries to the partner institutions. The harmonized eligibility criteria and specific arrangements will be developed during the Completion Project Design Mission.

59. **Subcomponent 2.2 Innovative Financial Products** (US\$0.7 million). The Project will partner with those financial service providers interested in the development of innovative financial products and solutions for agriculture, and committed to piloting these products and documenting lessons learnt. An amount of USD 0.7 million will be allocated for this purpose to cover the costs of product development experts, possibly any necessary technological equipment, training of interested financial institutions, and the documentation and dissemination of lessons learnt.

60. These products can include (but are not limited to):

- *Warehouse receipts* finance that can allow smallholders to use the stored produce as collateral with which to access credit from financial institutions and allows them to smooth consumption as they search for the best market or wait until prices rise;⁶³
- Using *digital tools* to improve access to finance within value chains. These include (i) targeted digitization of relationships between producers and buyers within existing value chains, (ii) the digitization of broader relationships – both financial and non-financial – between actors within existing value chains (e.g. relationships between producers, buyers, input suppliers, and financial service providers), and (iii) efforts to use digital to ease excluded smallholders into value chains (e.g. technologies that help smallholders to improve the quality and reliability of their production, facilitate connections with buyers, and leverage these connections to improve access to a broader suite of financial services).⁶⁴

61. Financial service providers have high innovation potential: leading Kyrgyz FSPs (Ayil Bank, Bai Tushum Bank, Kompanion Bank, and Mol Bulak Finance MFI, to name those focused on agricultural lending and microfinance) have been active in developing innovative approaches to the provision of financial services which creates assurance in their capacity to develop new innovative financial products and solutions within the ATMP.

⁶³ A draft law on warehouse receipts is currently being discussed and planned for adoption in Kyrgyzstan. See:

<http://ub.kg/ru/sostoyalsya-kruglyi-stol-posvyashhennyi-voprosu-vnedreniya-skladskih-raspisok-v-kyrgyzskoj-respublike/>

⁶⁴ See: Digitizing Value Chain Finance: Archetypes, Emerging Models, and a Vision for Greater Scale. Focus Note, CGAP, forthcoming.

Component 3: Upgrading the Kyrgyz Livestock Sanitary System

Component's Rationale, Approach, Outcome and Outputs

62. Since the ATMP Concept Note⁶⁵ (CN) was written and reviewed (February & November 2015) several major external and internal environment changes have occurred. An EAEU veterinary inspection mission of the Kyrgyz livestock sanitary system took place in February 2015 with a report⁶⁶ issued two months later. The report painted a bleak assessment of the sanitary system in the country and recommended to deny the right to export of any live animals or non-processed meat or milk and dairy products into the territory of the EAEU from the Kyrgyz Republic, thus negatively affecting incomes of livestock smallholders (see more details in Working Paper 1 for Project's Component 1).

63. The country earned a bleak assessment not because there are numerous outbreaks and uncontrolled diseases but primarily because the sanitary situation is either unknown or undocumented. Thus the inspection mission made detailed recommendations for rectifying deficiencies in: diagnostic and food safety laboratories, border control posts, animal identification, control and registration of animal remedies, disposal of rejected commodities and generally to follow the EAEU regulations. This mission also recommended taking back regulatory tasks that current Kyrgyz law, and the World Organisation for Animal Health (OIE) Terrestrial Code, allow to be delegated to the private sector. The Kyrgyz Veterinary Competent Authority, the State Inspectorate for Veterinary and Phytosanitary Security (SIVPSS), is now striving to meet or reconcile the sanitary requirements of the EAEU and recommendations of the inspection mission.

64. The timing of accession to the EAEU and urgency to meet the new sanitary standards were not known at the time of writing and review of the CN. By early 2016, however, the situation is clearer and now presents a sound framework for the ATMP to assist the Kyrgyz Government in meeting and reconciling these standards. Moreover, the MoAM is no longer responsible for Sanitary and Phytosanitary Agreement (SPS) matters. The SIVPSS is now delegated this responsibility. Thus with these two recent developments, Project assistance under Component 3 is now directed to the public sector State Inspectorate. Additionally, private sector animal health providers who are delegated specific regulatory tasks under the Kyrgyz law will be also assisted under the Project.

65. Component 3 will be aiming at Project's goal, i.e. to contributing to increased incomes and enhanced economic growth in pastoralist communities, at three levels: i) institutional capacity building of the SIVPSS; ii) capacity building in the private veterinary practice system; and iii) assistance to the supporting state institutions. Various activities in Component 3 will directly support Components 1 and 2. Component 3 scales up IFAD's involvement in the animal diseases control programmes (brucellosis and echinococcosis) that have been taken place since the AISP and now are ongoing under the LMDP, thus increasing livestock smallholders' resilience to outbreaks of animal diseases, and therefore improving their food security and nutrition.

66. The objective of Component 3 is to strengthen both key public and private sector arms of the Kyrgyz Veterinary Authority, which facilitate livestock commodity trade and safe food.

67. The SIVPSS needs to demonstrate its equivalency with sanitary standards of trading partners in the EAEU. To facilitate this, the Project will invest in upgrading selected public vet service 'critical competencies' as defined by the OIE in order to meet international standards. Significant investment will focus on upgrading skills and competence of the SIVPSS staff, upgrading and equipping two regional laboratories to international standards; supporting the government for animal identification in selected value chains; refurbishing some border posts; and assisting the Kyrgyz Livestock and Pasture Research Institute (KLPRI) and the Kyrgyz Scientific Research Veterinary Institute (KSRVI) with funding of specific innovations and the State Selection Breeding Center with investments to extend its dependable delivery of semen and artificial insemination supplies.

⁶⁵ Concept note on: Kyrgyz Republic: Access to Markets Project, October 2015.

⁶⁶ Ministry of Agriculture, Russian Federation Federal Service for Veterinary and Phytosanitary Supervision, Provisional report on the Eurasian Economic Union inspection experts of the animal origin production enterprises and products of the Kyrgyz Republic, Moscow, 2015.

68. The SIVPSS will continue making progress in controlling two priority infectious diseases, i.e. brucellosis and echinococcosis, where IFAD and the World Bank provided support under previous and ongoing programmes. The ATMP will support capacity building for strengthening 11 key critical competencies, which would allow the SIVPSS to move from Stage 1 to Stage 2 of the FAO-OIE Global Strategy for Control and Eradication of Peste des Petits Ruminants (PPR). Particular focus will be on establishing an active disease surveillance system. In addition to investments in the key critical competencies, the Project will procure PPR vaccines during Stage 2 and will have the option of purchasing other vaccines should an infectious disease outbreak occur. An outbreak of a notifiable animal disease such as foot and mouth disease, PPR or sheep/goat pox is a high risk for the Project as trading partners would immediately ban trade of livestock products until the disease was sufficiently controlled. Therefore the procured vaccines will serve a dual purpose, to moderate Project risks in case of a disease outbreak and to initiate control of PPR disease in line with the FAO-OIE Global Strategy for Control and Eradication of PPR (FAO-OIE GSCE PPR).

69. The private veterinary service arm, i.e. private veterinarians and paravets working at community level, will have their clinical diagnostic and treatment, production medicine, and extension skills upgraded. This will involve investment in capacity building and training Master Trainers for delivering relevant continuing education courses and for technical monitoring of the application of training course teaching at farm level. The continuing education for vets and paravets will be the extension arm for improving quantity, hygiene and safety along the dairy and red meat value chains. Continuing education will also provide the channel for certification of Accredited Veterinarians for carrying out state responsibilities as tasks delegated by the SIVPSS. These continuing education activities will be carried out as one function of the nascent Kyrgyz Veterinary Association (KVA). The Project will also provide limited support for the Kyrgyz Veterinary Chamber primarily for maintenance of additional databases.

70. The two relevant State research institutes, the KLPRI and KSRVI, will be supported via contracts to develop and deliver innovations in their particular research and competence spheres as well as deliver innovations suggested by the Project. For instance, the KLPRI would be contracted to supervise and manage pasture 'compartments' in Naryn oblast that meet definitions under the OIE Terrestrial Code. Such compartments will facilitate animal identification and offtake of grass-fed fat lambs for export. Another possible field for the KLPRI is to investigate and implement a pilot for the use of the lactoperoxidase system for short-term (~6 hours) milk preservation. The KSRVI will be contracted to organize and supervise quality control for a PPR serosurvey (Year 2) and brucellosis serosurvey (Year 3). The MoAM's State Selection Breeding Center will be provided some limited support to improve its efficiency in provision of improved bovine semen, liquid nitrogen and technical assistance, which are all essential services for dairy cattle raisers in the milk value chain.

71. The expected outcome of Component 3 will be "*the upgraded Kyrgyz livestock sanitary system*", which would be measured by a 10% increase in official export of live animals and livestock products.

72. The Component will have the following expected outputs together with the accompanying indicators:

Output 3.1 The SIVPSS demonstrates the equivalence of the Kyrgyz livestock sanitary system with other veterinary service sanitary systems in EAEU countries	<ul style="list-style-type: none"> ▪ EAEU sanitary agreements established with at least 2 countries; ▪ The right of official export of live animals or meat to at least one country; ▪ since the last serosurvey in each oblast where vaccination is occurring; ▪ The FAO-OIE Peste des Petit Ruminants control strategy in Kyrgyzstan moves from Stage 1 to Stage 2; ▪ Animal identification system in place in 14 selected value chains (dairy/meat cattle in at least 12 dairy milk compartments and grass-fed fat lambs in at least 2 PUUs compartments are permanently identified)
Output 3.2 The Kyrgyz Professional Veterinary Association is officially recognized	<ul style="list-style-type: none"> ▪ The KVA is registered by the relevant state department ▪ Induction courses are provided for at least 400 private vets ▪ Extension hygiene courses provided in at least 12 dairy milk compartments
Output 3.1 Increased dependable delivery of bovine artificial insemination semen and supplies to inseminators and their farmer clients by the State Selection Breeding Center	<ul style="list-style-type: none"> ▪ Use of bovine artificial insemination services increases by at least 15% in at least one oblast

Description of Component Activities

73. Component 3 comprises of three Subcomponents: (i) Strengthening the State Veterinary Sanitary System, (ii) Strengthening the Private Veterinary Practice System, and (iii) Strengthening the Supporting State Institutions.

74. **Subcomponent 3.1 Strengthening the State Veterinary Sanitary System** (US\$10.74 million) includes the following key activities:

- Technical support to SIVPSS
- Establishment of Accredited Veterinarian System
- Animal identification support for the selected dairy and fat-lamb meat value chains
- Rehabilitation of regional veterinary diagnostic laboratories
- Rehabilitation of internal border posts.

75. **Technical support to SIVPSS.** Component 3 is the public good part of the ATMP that allows government to meet selected demands from EAEU trading partners as well as to upgrade the SIVPSS to international SPS Agreement and OIE standards.

76. The Project will make a provision for 3-4 national consultants for the SPS/Epidemiology Unit in the SIVPSS headquarters who will receive intensive training in the use of the SPS Agreement in negotiations with trading partners. The SIVPSS Director can rely on these knowledgeable consultants as he negotiates the equivalency of the upgraded Kyrgyz livestock sanitary and food safety systems with trading partners. International technical assistance will guide members of this unit and others responsible in the SIVPSS to initiate effective active disease surveillance and reporting, become proficient in carrying out qualitative risk assessments, and in formulating epidemiology-based disease control strategies. This unit will ensure timely and transparent disease reporting to the OIE and provide current advice on the sanitary situation for the SIVPSS Director, the Minister of Agriculture and Melioration and others.

77. Further, technical assistance will be provided to the SIVPSS for establishing an **Accredited Veterinarian system**. The Kyrgyz law and OIE standards allow private practice veterinarians to carry out specific regulatory tasks as delegated by the Veterinary Authority, which is the SIVPSS, and under its supervision. Even though this delegated authority is well recognized in international standards, it is questioned by the EAEU trading partners. Short course training, testing and certification for Accredited Veterinarians will help ensure that specific delegated regulatory tasks are carried out correctly, meet standards (equivalence) of trading partners and allow accountability through the Kyrgyz Veterinary Chamber.

78. Kyrgyz Accredited Vets will have delegated authority and the necessary expendable equipment, for tuberculosis testing, writing certificates for animal movement, vaccinations in emergency situations, and for active surveillance and disease outbreak investigations. They will also have authority for brucellosis vaccination, identification and reporting. Likewise Accredited Vets will have authority for animal identification and registration of newborn animals. Much of this work will be carried out under contract from the SIVPSS.

79. The active disease surveillance system in Kyrgyzstan has been neglected over the years. Lack of an active surveillance system was noted as a deficiency by the EAEU inspection team and by the OIE Performance of Veterinary Services evaluation in 2007. Community-based private practice vets form the 'front line' of active surveillance and reporting of unusual disease occurrences. Reporting to raion SIVPSS veterinarians is the entry point for this active surveillance system and reports from the field. In addition to establishing active disease surveillance and reporting, the ATMP will invest in raion level field vehicles, annual maintenance and fuel for these vehicles, computers and Wi-Fi communication equipment. This upgraded active surveillance system is a cornerstone for rapid detection and suppression of diseases affecting livestock smallholders' vulnerability, international trade and also a necessary critical competency for moving from Stage 1 to Stage 2 of the FAO-OIE GSCE PPR.

80. Kyrgyzstan is participating in the FAO-OIE GSCE PPR by 2030 and is currently in Stage 1 (of 5 Stages until recognized PPR freedom). Bringing the SIVPSS to Stage 2 would be a major output of the ATMP. Stage 2 is the beginning of targeted PPR vaccination. The Project proposes that sufficient vaccine is procured for the first two years of vaccination, and that small ruminant owners are covering some costs from the beginning to the full coverage by the end of the Project (in PY1 at least 15 KGS for the vaccine plus 35 KGS for the service). The funds collected will 'prime the pump' or capitalize the major foreign currency cost of the third and fourth year's vaccination campaign, i.e. Stage 3 or eradication stage. Similar approach has been implemented for brucellosis vaccines and echinococcosis deworming medication for dogs under the ongoing LMPD.

81. The large investment in vaccines (US\$2.1 million) in fact serves two purposes for strengthening the capacity of the SIVPSS. First, purchase of PPR vaccine in the initial years will capitalize the PPR control programme and set the stage for eradication of the disease. Secondly, other vaccines⁶⁷ can be procured as and when an emergency arises. The FAO-OIE GSCEPPR is meant to target areas where PPR disease is occurring and those at high risk of occurring. Mass vaccination of the entire small ruminant population is not contemplated in the strategy. To achieve targeted vaccination, a serosurvey for the disease is planned in Year 2. Results of this survey will locate areas for vaccination and risk prevention. At this time, however, the number of vaccines needed for the first year is unknown but a provision is made for vaccinating all adult sheep and goats, if needed, plus vaccination of all offspring in the target vaccinated areas in two subsequent years.

82. The animal disease sanitary situation in Kyrgyzstan is thought to be favourable at this time. There is, however, a risk of an outbreak of a transboundary animal disease that would lead to major losses by livestock smallholders and banning trade in live animals and livestock products by trading partners. Foot and mouth disease is the disease of major concern; PPR is another. By having a vaccine budget line, the SIVPSS could purchase emergency vaccines as the need arose. This capacity should help assure rapid suppression and elimination of serious transboundary animal diseases and thus rapid re-opening of boundaries to livestock export trade.

83. Lack of a capacity for safe disposal of dangerous biological wastes was one deficiency noted by the EAEU veterinary inspection team. Two mobile biological incinerators, one in Bishkek, the other in Osh, will support the two SIVPSS reference laboratories for safe handling of infectious biological wastes.

84. **Animal identification support.** The SIVPSS is tasked with permanently identifying livestock in the country as a recommendation by the EAEU veterinary inspection team and as an international

⁶⁷ "other vaccines" include only those on the list of dangerous diseases for which the government is responsible.

standard under the OIE Terrestrial Code. A functioning animal identification system will support the SIVPSS's argument for equivalency of the Kyrgyz veterinary sanitary system.

85. The FAO supported the government in this field by designing an animal identification database, which is ready for field testing in 2016–2017 by the SIVPSS in three districts.

86. This Project will support the government's animal identification system by following on from the pilot studies, and it will be limited to some selected dairy value chains and the sheep value chains in Naryn. Following the lessons learned and recommendations from the pilot studies, technical assistance for field staff, ear tags (estimated at 130,000 dairy cattle plus 50,000 offspring annually; and 60,000 ewes and 25,000 male offspring annually), contracts for field staff, supervising research institution and database maintenance contracts will be provided under the Project.

87. **Rehabilitation of regional veterinary diagnostic laboratories:** The Project will rehabilitate and reequip two regional veterinary diagnostic laboratories, in Talas and Batken oblasts, as part of the SIVPSS's strategy to demonstrate equivalency to trading partners. The Russian Federation intends to rehabilitate two central reference laboratories (Bishkek and Osh), while the WB plans to support the regional vet diagnostic laboratory in Issyk-Kul oblast through the Integrated Dairy Productivity Project. The two regional laboratories will carry out basic serology tests, using modern ELISA technology and conventional tests as needed, bacteriology and parasitology. Virology, toxicology and other speciality testing will be referred to the central reference laboratories. The ATMP will provide sufficient technical assistance for training in the use of new equipment, laboratory management, laboratory quality control, sample preparation and related issues. Sufficient glassware, furniture, chemicals, media and reagents will be provided to stock the two new labs.

88. The Kyrgyz vet diagnostic laboratory system will carry out a country-wide serosurvey for PPR disease in Year 2 in order to devise vaccination and active surveillance strategies against this disease. As was already mentioned, with knowledge of PPR prevalence and distribution, active surveillance in place and a budget line for vaccine purchase, the SIVPSS should be able to move from Stage 1 to Stage 2 of the FAO-OIE GSCEPPR.

89. In Project Year 3, a brucellosis serosurvey in small ruminants is planned in order to monitor progress in controlling this important zoonotic⁶⁸ disease. Monitoring information will allow the SIVPSS to intensify vaccination in problem areas, reinvigorate public health messages and conduct field studies to understand why in some regions brucellosis in humans is not falling as expected.

90. **Rehabilitation of internal border posts:** The Project will rehabilitate three veterinary and phytosanitary check posts, two internal posts (within the Kyrgyz Republic) and one on the Kyrgyz-Kazakh border (seasonal post) as recommended by the EAEU veterinary inspection team. These border posts will be brought up to international standards in terms of facilities, inspection and communications equipment and staff training. The three internal posts will function within the overall EAEU trade control measures through inspection, trade statistics and pre-import notification among EAEU countries.

91. **Subcomponent 3.2 Strengthening the Private Veterinary Practice System** (US\$0.72 million) includes the following key activities:

- Support to Kyrgyz Veterinary Association (KVA)
- Support to Kyrgyz Veterinary Chamber

92. **Support to Kyrgyz Veterinary Association (KVA):** Veterinary professional associations are a recognized component by the OIE of the official Veterinary Authority's sanitary system. Professional vet associations directly represent the interests of its members (vets and paravets in Kyrgyzstan) and indirectly of consumers of vet services through assuring that vets offer up to date services desired by clients. A Kyrgyz Vet Association is under development since 2015 with assistance from an FAO-TCP,

⁶⁸ Zoonotic diseases are those those that affect animals and humans and can be passes from animals to humans. Over 75% of infectious diseases in humans have their origin in animals.

which is supporting associations at the district and national levels. The ATMP will build upon and support these nascent vet associations as an integral part of the national livestock sanitary system and as a mechanism for introducing practical continuing education to Kyrgyz vets and paravets.

93. The FAO support will end in late 2016 by which time, local district and national KVA chapters will be organized and with a national Executive Director/Chairman elected. The elected leadership will follow through on the agreed plans for continuing education; will register the KVA as a legal NGO, and will generally guide the organization at national and local levels. The ATMP will support this agenda with study tours, technical assistance, office equipment and communications, translation and publishing of technical training materials and, most importantly, for training Master Trainers (plus contracted subject matter specialists) to provide practical, current continuing education for upgrading skills of community-based veterinarians and paravets. The Master Trainers will also provide technical content for dairy and meat hygiene messages to smallholders in the Project's value chains.

94. The ATMP will provide funds for Kyrgyz professionals to attend two World Veterinary Association (WVA) Conferences. The WVA is a well-recognized global association representing private practice as well as government service vets. The WVA has an online Continuing Education Portal where Kyrgyz vets may access further training and education. It is a worthwhile learning experience for the KVA to be a member of this global organization and for up to three Kyrgyz professionals to attend semi-annual world conferences held every other year.

95. The ATMP will provide support for the KVA to organize up to five annual conferences for Kyrgyz vets, paravets and animal health related organizations. Funds will be provided for advertising, renting a venue as well as for up to 3 invited international speakers/presenters for each conference. Invited speakers will present continuing education (lectures, practical lab sessions, demonstrations) courses on specific topics of interest to Kyrgyz vets and paravets, in private practice or in government. One study tour is envisaged for KVA board members to view how professional veterinary associations in other countries are organized and learn of services they provide to members.

96. Funds will be provided for the Executive Board's operating expenses such as meeting venues and travel; a vehicle and its running expenses; and hiring a driver and bookkeeper. Project support for the KVA's operational expenditures will be provided on a declining basis whereby the KVA would be fully covering these costs by the project completion. The Project will assist the KVA to develop a business plan to ensure sustainability.

97. Master Trainers will be hired by the KVA and will receive technical assistance on (i) upgrading practical clinical diagnosis and treatment, preventive medicine and reproduction skills; (ii) managing a small business/veterinary practice; and (iii) dairy and meat hygiene extension on the farm. Master Trainers will provide Induction and Refresher training on clinical medicine and surgery, preventive medicine, pregnancy diagnosis, disease recognition and other contemporary courses of practical value to private practice veterinarians and paravets. Master Trainers will lead the Veterinary Accreditation process whereby private practice vets are officially accredited (through short courses and an examination) to the SIVPSS. Only Accredited Veterinarians will be eligible for carrying out delegated tasks from the SIVPSS under contract. These Master Trainers will, from Project Year 2, be upgrading skills of up to 100 vets and paravets per year. Subject matter specialists from Kyrgyz institutions or the private sector will be contracted for specific short courses. The model for Master Trainers comes from veterinary privatization programmes in other Central Asian/Eastern European countries and some technical assistance will be sourced from these countries.

98. Additionally, these Master Trainers will provide the technical support for smallholder producers under Subcomponent 1.1 for dairy and meat hygiene extension messages. The Master Trainers will provide extension messages to and monitoring of uptake by community-based providers. It is also anticipated that Village Health Committees would be involved (Subcomponent 1.2) as the most effective and sustainable deliverers of these messages (at no costs to the Project).

99. Funds will be provided for drafting, translating and publishing up to date texts, brochures and other learning materials for Kyrgyz vets, paravets and smallholder livestock producers. It is expected

that at least four major texts and numerous smaller brochures will be published over the life of the Project.

100. The KVA will receive funds for a modest headquarters office with furniture, computer/printer and communication equipment.

101. **Support to Kyrgyz Veterinary Chamber:** The IFAD/World Bank-funded AISP helped establish a Kyrgyz Veterinary Chamber as an essential structure, the Veterinary Statutory Body, according to OIE standards. The Kyrgyz Veterinary Chamber is now functioning well, is the first Veterinary Statutory Body among countries in Central Asia and is recognized internationally for its innovative and professional activities. To date the Chamber has registered nearly 700 Kyrgyz vets and 1,500 paravets as well as maintained a large amount of OIE and Kyrgyz documents in its online web site (www.vet-palata.kg).

102. The ATMP will limit its support to procurement of a larger server capacity (for additional databases), updated computers, printers, internet communication equipment and a car. One study tour is planned to observe operations and organization of one or more European country veterinary chambers.

103. **Subcomponent 3.3 Strengthening the Supporting State Institutions** (US\$0.73 million) includes the following key activities and investments:

- Contracts for state research institutions for innovations, pilot studies, supervision of field sera sampling, quality assurance of field and laboratory work and analysis reports
- Extending the reach for delivering artificial insemination supplies by the State Selection Breeding Center (under the MoAM)

104. The **Kyrgyz Livestock and Pasture Research Institute (KLPRI)** will be a lead contractor for organizing and managing official 'compartments', which effectively separate livestock flocks/ herds on summer pastures in different PUUs in Naryn oblast. The KSRVI will be subcontracted to provide quality assurance that the compartments meet OIE standards, i.e. the OIE Terrestrial Code definition; allow animals, particularly small ruminants, to be individually identified, treated as isolated epidemiological units for disease control purposes and thus eligible for official export. Establishing official compartments will require information campaigns for PUUs/PCs, agreeing and enforcing recognized compartment boundaries, managing the livestock within the compartments and during transport, and facilitating fat-lambs export via the certified abattoirs in Bishkek (for example TORO).

105. The KLPRI will also be contracted to investigate and manage a pilot study for using lactoperoxidase milk preservation technology in selected dairy value chains. The lactoperoxidase system entails adding a measured amount of two chemicals to raw milk on the farm with the aim to activate natural bacteriostatic enzymes, which extend the time up to 6 hours before milk becomes spoiled. These chemicals are approved for use by the FAO-WHO Codex Alimentarius Commission, and the system has been tested by FAO in a number of countries over the last 15 years.

106. The **Kyrgyz Scientific Research Veterinary Institute (KSRVI)** will be contracted to organize and manage two sera surveys (Years 2 & 3) in collaboration with the SVIPSS diagnostic laboratory system. One or two SVIPSS laboratories will be subcontracted to carry out ELISA tests for PPR and brucellosis and to retain representative sera samples in a frozen bank. Approximately 20,000 sera from small ruminants will be collected nation-wide according to two random sample frames. The institute will be contracted to design the sampling frames; manage collection from the field and delivery to one or two designated laboratories; assure quality control in the field collection process and in laboratory testing; and analyze the results.

107. As was already mentioned, the KSRVI will be sub-contracted (see paragraph above) to provide technical advice and quality assurance for setting up official compartments in Naryn oblast.

108. The **State Selection Breeding Center (SSBC)**: Artificial insemination services are available in Kyrgyzstan but there is scope for marked expansion. Smallholder and peasant farmers largely have

crossbred cattle which have low milk productivity even when fed well. Artificial insemination is a proven cost-effective technology for breed improvement and increases in milk quality and quantity albeit over a long time-frame.

109. The SSBC will be assisted through procuring two liquid nitrogen generation plants and one heavy duty truck with a 1 MT liquid nitrogen cryogenic tank. The Center is currently relying on two old liquid nitrogen plants that are difficult and costly to maintain. The two new liquid nitrogen generating plants will each have a capacity up to 90 kg per hour. One will be situated to assure liquid nitrogen supplies to the north and one situated for assuring supply in the south. These investments will facilitate timely, all-weather and wider delivery of semen and liquid nitrogen for increasing access to artificial insemination for dairy (and beef) cattle. The Project will assist the SSBC to develop a business plan to ensure sustainability.

Annex 1: Terms of Reference for key staff and consultants

VALUE CHAIN DEVELOPMENT COORDINATOR (National)

Duties and Responsibilities

Coordinate the mapping of all key value chain stakeholders critical to the successful implementation of Component 1

Initiate consultations with identified value chain stakeholders to develop and agree on value chain development business plan;

Guide implementation partners and technical service providers on the identification, planning, implementation, monitoring and evaluation of value chain support activities, including the promotion of entrepreneurial skills in farmers' organizations;

Facilitate linkages and contacts between the supported value chains' stakeholders including input suppliers and service providers, processors, middlemen and farmers;

Coordinate the formulation and development of value chain financing mechanisms for improving the accessibility of financial services and knowledge to farmers and other value chain stakeholders;

Ensure adequate synergies between Component 1 and the other operational components of the ATMP, in collaboration with the respective Component heads;

Monitor the development of innovative business models and, in collaboration with the KM and Communication Specialist and the Monitoring and Evaluation Specialists ensure related knowledge management, including the identification of best practices;

Guide the preparation and implementation of the various value chain related studies; Contribute to the preparation of project Annual Work Plans and Budgets (AWPBs) and progress reports; and

Undertake any other duties assigned by the APIU Director and IFAD Projects' Coordinator.

Qualifications

Master's degree in Agricultural Economics, Agribusiness. Agriculture, Economics, Rural Development or a related discipline from a recognized university;

At least 8 years working experience in a similar field. 3 of which should be in senior management position;

Experience in the private sector will be considered a plus.

Demonstrated practical experience in facilitating livestock value chain development at field level value chain analysis and in building capacity of value chain actors. Practical experience in livestock value chains development will be an added advantage.

Knowledge of technologies and best practices in value chain development, business development, and rural livelihoods;

Strong computer and communications skills (oral, written, presentation); and

Strong coordination, leadership and interpersonal skills.

A good knowledge of the local language could be an added advantage.

RURAL FINANCE COORDINATOR (National)

Reporting to: APIU Director/IFAD Projects' Manager

The Agricultural Projects Implementation Unit (APIU) is requesting the services of a Rural Finance Coordinator to co-ordinate the activities of the Livestock Value Chains Financing Component of the IFAD-financed Access to Market Project (ATMP), the outcome of which will be “efficiency and profitability along targeted smallholder-inclusive livestock value chains increased”, will enable livestock value chain actors to increase their investment in profitable livestock value chains through provision of grants and by linking them with external credit lines such the one of the Russia-Kyrgyz Development Fund. In addition, the Component activities will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers. The overall duties of the Rural Finance Coordinator will be to assist the APIU in all aspects of the Livestock Value Chains Financing Component of the Project.

The suitable candidate will have the following background and experience:

Educational Background:

- Diploma in economics/banking/finance.

Experience:

- Minimum 5 years working experience in the financial sector.
- Minimum 3 years practical working experience with economics and financial analysis.
- Computer literacy and proficiency (word processing, spread sheets and data bases).
- Strong verbal and written communication skills.
- Ability to work efficiently under pressure and to meet deadlines.
- Well-organised and well oriented to details.
- Knowledge and experience in agriculture, sociology, market research and statistics is a plus.

Duties and Responsibilities include, but are not limited to:

- Setting-up and maintaining databases for external partner institutions and end-borrowers in accordance with the project design.
- Creating and maintaining customer files and documents on the basis of information received from Component 1 of the Project.
- Act as a liaison with FSPs – providers of external credit lines;
- Together with Component 1 staff, working to prepare business plans and loan applications for external funding based on conditions and requirements of FSPs;
- Managing portfolio reporting activities with external partner institutions.
- Exercising monitoring activities in accordance with M&E plan and guidance, including the monitoring of any additional indicators as agreed upon with FSPs providing external credit lines;
- Overseeing the selection process of FSPs interested in the development of innovative agricultural products and solutions.
- Together with FSPs, developing Terms of Reference for consultants to be hired for the new product development and prepare budgets for these projects.
- Developing and implementing product lessons learnt dissemination plans (including the creation of an online resource website), monitoring feedback and uptake, and developing reports on dissemination and uptake.
- Preparing periodic reports in accordance with project procedures.
- Undertake any other duties assigned by the APIU Director and IFAD Projects' Manager.

VALUE CHAIN DEVELOPMENT ADVISER (International)

Duties and Responsibilities

A Value Chain Development Adviser (VCD Adviser) will be appointed by the Project. S/he's role will be to provide technical support to the APIU and ARIS on a periodic basis concerning ATMP development of livestock value chains, and business mentoring to value chain stakeholders, particularly Leading Entities (LEs) and input suppliers and service providers, active in the selected value chains and receiving Project support.

The VCD Adviser, with support from the APIU and ARIS, will support the directors and other key staff of LEs and other entities active in the selected livestock value chains in developing the procedures and systems needed to make them operational and effective in relation to: (i) business and investment planning(ii) supplier relationships and products collection and storage; (iii) livestock product development; (iv) livestock processing and marketing in local centres.

The VCD Adviser's duties and responsibilities will include:

- carry out a study on the future demand for livestock products (volume, product types, location, competitiveness with imports) and, if needed, adjust scope and volume of the investment in this sector accordingly;
- analyze broad developments and challenges within Kyrgyzstan livestock industry value chains, from production, primary processing, packaging, processed products and retail, focusing on market structure, key factors of growth, and sector challenges;
- assist in designing a livestock value chain development and business management training programme, including the detailed training modules, and training of ATMP contracted trainers who will teach LE owners/managers in these fields;
- Assisting the APIU and ARIS and contracted service providers in designing and implementing the VCDBP process;
- Providing oversight and guidance for the implementation of LE activities, including:
 - i. development strategies for improving links with producers and producer organizations;
 - ii. strengthening aggregation activities and improvements to product quality along the value chains;
 - iii. business management, negotiating skills, marketing and quality control;
 - iv. market studies and test marketing;
- Conducting seminars/training/workshops for LE technical personnel to ensure that they are current with the recent international best practice in livestock industry management;
- Preparing technical reports as may be required pertinent to the tasks undertaken.

Qualifications

- Minimum 10 years of experience in a mix of economic growth, trade, or value chain development, competitiveness, or agricultural development programmes;
- Minimum 5 years of experience in the private livestock manufacturing sector;
- Demonstrated success in implementing programmes increasing the competitiveness and inclusiveness of agricultural value chains, preferably with a focus on livestock products;
- Demonstrated knowledge of the latest developments in advancing good/best practices in value chain development;
- Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to intervening;
- Experience as a senior project manager for large and complex private sector agricultural development projects.

VC TRAINING ADVISER (International)

Duties and Responsibilities

A VC Training Adviser will be appointed by the Project. She/he's role will be to provide technical support to the APIU and ARIS on a periodic basis concerning ATMP development of a capacity building programme for livestock value chain stakeholders including smallholder farmers, agrifood processors and input suppliers and service providers.

The VC Training Advisor, with support from the APIU and ARIS and VCD Adviser, will, drawing on national and regional training materials and resources, prepare and conduct the delivery of a capacity building training programme covering: (i) smallholder farmer animal husbandry and production and farming as a business; (ii) peasant farmer animal husbandry, production and farm management; (iii) farming as a business training for women and youth; (iv) private veterinarian refresher training; (v) business management training for input suppliers and service providers; and (vi) technology, enterprise management and product development and marketing training for agrifood processing enterprises.

The VC Training Advisor's duties and responsibilities will include:

- Carry out analysis of the key bottlenecks in the existing livestock value chains and identify gaps in accessing the technical assistance and training by value chain actors (project beneficiaries);
- Based on the analysis assess the needs of project beneficiaries in technical assistance and training in livestock production and processing, including milk/meat handling, hygiene and quality standards, packaging, branding and marketing;
- Prepare an overview of national/international Service Providers (government institutions, NGOs, academic and educational institutions etc.) capable to deliver required TA and training;
- Assess the quality of existing nationally and regionally available training materials (curricula, modules, hand out materials etc.) and propose recommendations for improvement;
- Prepare a Training Plan which should include the training topics, training modules and curricula, hand out materials and estimated budget;
- Carry out regular monitoring and evaluation of the TA and training provided under the Project;
- Prepare necessary reports as required by the APIU and IFAD.

Qualifications and experience:

- The incumbent shall hold an MSc degree in the field of livestock production or processing and have at least 10 years of experience in capacity building;
- Demonstrated success in implementing programmes building the capacity of agricultural value chains, preferably with a focus on livestock products;
- Demonstrated knowledge of good/best practices in agricultural education;
- Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to intervening;
- Prior experience in CIS, and/or other Central Asia countries; a proven ability to work collaboratively with Government Ministries, IFIs and/or other donors; experience forging partnerships between private sector entities, and familiarity with the political and economic dynamics in which this Project will be implemented;
- Good spoken and written Russian and English;
- Ability to work in other languages used in the region would be an advantage.

MILK PROCESSING TECHNOLOGY ADVISER (International)

Duties and Responsibilities

A Milk Processing Technology Adviser will be appointed by the Project. She/he's role will be to provide technical support to the APIU and ARIS on a periodic basis concerning ATMP development of dairy industry processing technology and product development and marketing.

The Milk Processing Technology Advisor, with support from the APIU and ARIS, will (i) assist leading milk processing enterprises to improve their production and energy efficiency, strengthen sanitary controls and develop new products, primarily for the domestic market; (ii) assist small-scale artesian milk processors to produce safe, reliable products for local green markets; and (iii) enhance the capacity of public health dairy inspectors.

The Milk Processing Technology Advisor's duties and responsibilities will include:

- Mapping out and analyze the existing dairy processing technologies and practices employed by the value chain actors along the value chains, including cottage industry and household based processing;
- Identifying key problems pertaining to the existing technologies and practices with respect to the hygiene standards, quality and safety control, equipment, packaging, branding and marketing of dairy products;
- Based on the analysis propose recommendations (including new technologies, equipment, TA and training etc.) for improvement to enhance the value chain actors' capacity to add value and increase incomes;
- Assist the APIU and ARIS in sourcing and procuring required new technologies, equipment, TA and training;
- Assist the VC Training Adviser in preparing relevant training curricula, modules, hand out materials and in delivering relevant training; and
- Prepare necessary reports as required by the APIU and IFAD.

Qualifications and experience:

- The incumbent shall hold an MSc degree in the field of food or dairy processing and have at least 10 years of experience in milk processing enterprise management;
- Demonstrated success in implementing programmes strengthening dairy processing at national level;
- Demonstrated knowledge of good/best practices in milk processing and dairy product development;
- Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to intervening;
- Prior experience in CIS, and/or other Central Asia countries; a proven ability to work collaboratively with Government Ministries, IFIs and/or other donors; experience forging partnerships between private sector entities, and familiarity with the political and economic dynamics in which this Project will be implemented;
- Good spoken and written Russian and English;
- Ability to work in other languages used in the region would be an advantage.

MEAT PROCESSING TECHNOLOGY ADVISER (International)

Duties and Responsibilities

A Meat Processing Technology Adviser will be appointed by the Project. She/he's role will be to provide technical support to the APIU and ARIS on a periodic basis concerning ATMP development of meat industry processing technology and product development and marketing.

The Meat Processing Technology Advisor, with support from the APIU and ARIS, will (i) assist leading meat processing enterprises to improve their production and energy efficiency, strengthen sanitary controls and develop new products; (ii) assist small-scale artesian meat processors to produce safe, reliable products for local green markets; and (iii) enhance the capacity of public health meat inspectors.

The Meat Processing Technology Advisor's duties and responsibilities will include:

- Mapping out and analyze the existing meat processing technologies and practices employed by the value chain actors along the value chains, including cottage industry based processing;
- Identifying key problems pertaining to the existing technologies and practices with respect to the hygiene standards, quality and safety control, equipment, packaging, branding and marketing of meat products;
- Based on the analysis propose recommendations (including new technologies, equipment, TA and training etc.) for improvement to enhance the value chain actors' capacity to add value and increase incomes;
- Assist the APIU and ARIS in sourcing and procuring required new technologies, equipment, TA and training;
- Assist the VC Training Adviser in preparing relevant training curricula, modules, hand out materials and in delivering relevant training; and
- Prepare necessary reports as required by the APIU and IFAD.

Qualifications and experience:

- The incumbent shall hold an MSc degree in the field of food or meat processing and have at least 10 years of experience in meat processing enterprise management;
- Demonstrated success in implementing programmes strengthening meat processing at national level;
- Demonstrated knowledge of good/best practices in meat processing and meat product development;
- Demonstrated creativity, willingness to innovate, think systemically and design catalytic approaches to intervening;
- Prior experience in CIS, and/or other Central Asia countries; a proven ability to work collaboratively with Government Ministries, IFIs and/or other donors; experience forging partnerships between private sector entities, and familiarity with the political and economic dynamics in which this Project will be implemented;
- Good spoken and written Russian and English;
- Ability to work in other languages used in the region would be an advantage.

Veterinary Coordinator (under the SIVPSS)

1. General tasks and responsibility

The Veterinary Coordinator will coordinate implementation of Component 3 and some activities of other components related to animals health and be responsible for all outputs in collaboration with the SIVPSS and MoAM; the IFAD supervision team; and all implementing partners involved in the ATMP implementation; this specifically includes:

- All structures of SIVPSS (State Veterinary Services);
- KSRVI, KSRILP; SSBS
- Veterinary Chamber; Private veterinarians and their unions (KVA);
- Animal Health sub-committees of PUU; pasture users unions / pasture committees;
- International and local contractors;
- Republican, regional and local public and community-based organizations including village health committees,
- Respective structures of the Ministry of Agriculture and Ministry of Health.

2. Scope of services and duties

The Veterinary Coordinator shall provide technical, information and advisory assistance in strengthening the State Veterinary Sanitary and the Private Veterinary Practice Systems updating strategies and control implementation of the approved plans of actions and activities aimed at improvement of animal health and veterinary services in the Kyrgyz Republic. He/She shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the Veterinary Coordinator include the following but not limit to:

- follow up and provide assessment of planning process, organizing and providing special project actions of all state, private, public institutions, organize coordination meetings, workshops with participation of institutions and organizations involved into animal health actions, if needed;
- assist in timely preparation of procurement plans, work programs, budgets, progress reports and M&E reports required under IFAD guidelines and/or government regulations;
- assist in monitoring implementation of contracts on supply and advisory services concluded with the various component implementing agencies;
- ensure control and implementation of animal disease control program and collaboration with the state veterinary service on implementation of the respective activities;
- together with the respective units of APIU and Project implementing agencies organize and implement field monitoring and evaluation of the project progress and results in veterinary and animal health;
- jointly with the Project implementing agencies – partners communicate and work with OIE towards achieving of the expected results in veterinary on a regular basis;
- provide support to the technical assistance and advice for the project activities associated with animal health, and integrate inputs and recommendations of the international specialists effectively;
- participate in designing and updating normative and legal acts, technical guidelines, training modules and other information and training materials in veterinary / animal health;
- participate in the work of experts, work groups on issues of veterinary, animal health;
- prepare descriptive and analytical reports as per his/her field of activity;

3. Reporting and approval

The Veterinary Coordinator shall report directly to the SIVPSS Director who will assess performance of his/her duties on the regular basis.

4. Institutional arrangement

The Veterinary Coordinator shall work under the direction of the SIVPSS Director and in close coordination with the APIU Director. He/She shall work closely with all APIU staff, State Veterinary Services, ARIS, KSRILP, KSRVI, VC, KVA and other partners of the Project.

5. Place of the assignment

The main part of the work the Consultant shall implement in the SIVPSS office. The Consultant shall visit districts and oblasts of the country to perform specific tasks.

6. Qualification and experience

The Veterinary Coordinator should meet the following qualification criteria:

- University degree in veterinary science.
- At least 5 year experience in veterinary fields and familiarity with SPS Agreement matters, particularly with livestock and livestock products;
- Experience in the programs or projects implemented under IFAD or other donor-funded projects is an asset;
- Experience in preparation of the strategy, programs and projects of the national or sectoral nature;
- Experience of work with the state structures, high rank state officials and representatives of foreign organizations, non-governmental organizations and private companies;
- Experience of preparation, organization and conduction of various training, consultations and other information and technical assistance;
- Experience of preparation and implementation of monitoring and evaluation of various programs and projects, specific campaigns or activities;
- Excellent strategic and analytical thinking, skills to make descriptive and analytical reports with examples, diagrams, tables etc.
- Good communication skills, Excellent knowledge of Russian and Kyrgyz, knowledge of English is an asset;
- Computer literacy is a must.

7. Duration of the assignment

The period of assignment in the position will be initially 12 months (with a 3-month probation period) and may be extended by agreement of the parties.

International Veterinary Epidemiologist (IVE):

1. General tasks and responsibility

The IVE will provide training on practical, applied epidemiology and qualitative risk assessment. S/He will focus staff training and advising on setting up an effective Epidemiology/SPS Unit within the SIVPSS. This unit will have responsibility for implementing an epidemiology-based active surveillance system for priority diseases including methods for monitoring the effectiveness of ongoing disease control strategies (brucellosis, PPR, echinococcosis). Staff of this unit will be competent in use of the SPS Agreement and other international standards pertaining to trade in live animals and animal products. Staff will be competent in use of risk assessments for negotiating livestock sanitary agreements with trading partners.

2. Scope of services and duties

IVE shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the IVE include the following but not limit to:

- Study and evaluation of existing surveillance system in KR, an identification of major gaps and make recommendations for remedial action;
- Assessment of the existing the WTO SPS measures applied in KR to make recommendations for its improvement
- Development of training modules including guidance for the trainer and guide for participants as well as the slides for presentations
- Development of guidance and standard operating procedures for the active and passive veterinary surveillance to meet the requirements of the OIE
- Implementing an epidemiology-based active surveillance system for priority diseases including methods for monitoring the effectiveness of ongoing disease control strategies (brucellosis, PPR, echinococcosis).

3. Qualification and experience

The International Veterinary Epidemiologist should meet the following qualification criteria:

- University degree in veterinary science from a recognized university
- At least 7 years applied experience in a government agency responsible for SPS matters, disease control or trade promotion
- Familiarity with international standard setting organizations (OIE, WTO, FAO-WHO Codex) is desirable
- Experience in veterinary fields and familiarity with SPS Agreement matters, particularly with livestock and livestock products;
- Experience in the programs or projects implemented under IFAD or other donor-funded projects is an asset;
- Experience in preparation of the strategy, programs or projects on Veterinary Epidemiology;
- Experience of work with the state structures, non-governmental organizations and private companies;
- Experience of preparation, organization and conduction of various training, consultations and other information and technical assistance on veterinary epidemiology;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English; knowledge of Russian is of preference
- Good communication skills, computer literacy is a must.

International Laboratory Technologist (ILT):

1. General tasks and responsibility

The ILT will provide training on applied and practical laboratory disease diagnostic methods particularly with serological tests (ELISA technology), and culture and identification of bacteria and parasites. S/He will set up an inter-laboratory quality control testing programme and review results. General training will include preparation of samples (sera, tissues, cultures) for shipment, Good Laboratory Practice methods, safe disposal of biological materials and general laboratory management.

2. Scope of services and duties

ILT shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the IVE include the following but not limit to:

- Prepare written standard operating procedure specification for test procedures and new equipment as needed;
- Development of training modules on preparation of samples (sera, tissues, cultures) for shipment, Good Laboratory Practice methods, and general laboratory management, including guidance for the trainer and guide for participants as well as the slides for presentations;
- Development of guidance and standard operating procedures for the safe disposal of biological materials and general laboratory management;
- Elaboration of training materials and conduct training for the laboratory staff on proper use new laboratory equipment and providing laboratory services (serological tests - ELISA technology, culture and identification of bacteria and parasites).

3. Qualification and experience

The International Laboratory Technologist should meet the following qualification criteria:

- Advanced university degree in veterinary or appropriate branch (epidemiology, genetics);
- Work experience as a senior laboratory technologist in a medium- to high-volume veterinary diagnostic laboratory and have at least 5 years' experience in this capacity;
- Minimum 3-year experience in working in international animal health projects;
- Sufficient practical experience in developing and implementing of standard operating procedures for working with laboratory equipment and diagnostic systems;
- Sufficient practical experience in preparing and carrying out of workshops for laboratory specialists;
- Sufficient practical experience in working with ELISA equipment;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English; knowledge of Russian or Kyrgyz is of preference;
- Good communication skills, computer literacy are a must.

International Accredited Veterinarian Specialist (IAVS):

1. General tasks and responsibility

The IAVS will provide comprehensive training to a team of Kyrgyz veterinarians (in the KVA and SIVPSS) on setting up and implementing an Accredited Veterinarian system. This training will include: the philosophy of accredited veterinarians carrying out delegated tasks under supervision by the Veterinary Authority (SIVPSS); criteria for selecting delegated tasks; training curriculum, testing and registering Accredited Veterinarians in Kyrgyzstan.

2. Scope of services and duties

IAVS shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the IVE include the following but not limit to:

- Draft of legislation to legalize the Accredited Veterinarian system in Kyrgyzstan;
- Development of criteria for selecting delegated tasks and methods for supervising Accredited Veterinarians;
- Elaboration of a written training curriculum and system for soliciting test questions;
- Conducting trainings for the first approximately 50 Kyrgyz vets (groups of 25) which will be tested and registered during the second consultancy mission;
- Set up a registry database in collaboration with the Veterinary Chamber.

3. Qualification and experience

The International Accredited Veterinarian Specialist should meet the following qualification criteria:

- Advanced university degree in veterinary or appropriate branch (epidemiology, etc);
- Work experience as a qualified trainer responsible for training Accredited Vets (or their equivalent) and have at least 3 years' experience in this capacity;
- Familiarity with international standard setting organizations (OIE, WTO, FAO-WHO Codex) is desirable;
- Experience in veterinary fields and familiarity with SPS Agreement matters, particularly with livestock and livestock products;
- Experience in the programs or projects implemented under IFAD or other donor-funded projects is an asset;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English; knowledge of Russian or Kyrgyz is of preference;
- Good communication skills, computer literacy are a must.

International Animal Identification Specialist (IAIS):

1. General tasks and responsibility

The IAIS will use lessons learned from the Kyrgyz pilot animal identification study in three raions to design and implement a practical animal identification scheme in selected dairy cattle value chains and in at least two fattening lamb compartments in Naryn. Implementation will include: training for field vets and paravets who will apply tags and register cattle and calves, data management from the field to database center, maintenance of the database, and quality control of cattle identification data. Relevant SIVPSS staff (epidemiology/laboratory/others) will carry out simulation exercises for tracing back and tracing forward several individual cattle and fattening lambs in order to test the system. Relevant standard operating procedure manuals will be prepared (in English) for future training and operation of the animal identification system.

2. Scope of services and duties

IAIS shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the IVE include the following but not limit to:

- Evaluation of existing animal identification system in KR, and identification of its major gaps to make recommendations for remedial action;
- Development and implementation a practical animal identification scheme in selected dairy cattle value chains (at least in two value chains)
- Implementation a practical animal identification scheme in selected at least two fattening lamb compartments in Naryn oblast;
- Elaboration training materials and conducting trainings for field veterinarians on data management from the field to database center, maintenance of the database, and quality control of cattle/lamb identification data;
- Organizing the simulation exercises for tracing back and tracing forward several individual cattle and fattening lambs in order to test the system with participation of relevant SIVPSS staff.

3. Qualification and experience

The International Animal Identification Specialist should meet the following qualification criteria:

- Advanced university degree in Animal Health, Veterinary or appropriate branch (livestock management and/or quality control of an animal identification system, etc.);
- Work experience as a senior manager responsible for training, management and/or quality control of an animal identification system in a relevant country and at least 5 years' experience in this capacity;
- Familiarity with international standard setting organizations (OIE, WTO, FAO-WHO Codex) is desirable;
- Familiarity with SPS Agreement matters, particularly with livestock and livestock products;
- Experience in the programs or projects implemented under IFAD or other donor-funded projects is an asset;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English; knowledge of Russian or Kyrgyz is of preference;
- Good communication skills, computer literacy are a must.

International Lactoperoxidase Specialist (ILPS):

1. General tasks and responsibility

International Lactoperoxidase Specialist will be recruited to assist the KLPRI in setting up pilot studies for the use of lactoperoxidase in several dairy value chains. S/He will assist in village/MCCC selection; provide practical training of villagers, Master Trainers and others in the correct use of lactoperoxidase at the household level.

2. Scope of services and duties

International Lactoperoxidase Specialist shall with all responsibility implement works described in the Terms of Reference and scope of services. The main duties of the ILPS include the following:

- Elaboration of training materials in the proper use of lacto-peroxidase at the household level;
- Provide practical training of dairy cattle keepers/owners, Master Trainers and others in the correct use of lactoperoxidase at the household level;
- Design the chemical delivery and supply system;
- Design a record keeping/quality control system;

3. Qualification and experience

The International Lactoperoxidase Specialist should meet the following qualification criteria:

- Advanced university degree in food science, dairy science or in a relevant field;
- At least 5 years' experience in the use of the lactoperoxidase system under smallholder village conditions;
- Familiarity with international standard setting organizations (OIE, WTO, FAO-WHO Codex) is desirable;
- Experience in the projects implemented under IFAD or other donor-funded projects;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English;
- Knowledge of Russian or Kyrgyz is of preference;
- Good communication skills;
- Computer literacy is a must.

International Veterinary Clinician Trainer (IVCT)

1. General tasks and responsibility

The International Veterinary Clinician Trainer will agree the training and refresher training curricula with KVA, Veterinary Chamber and SIVPSS and manage the overall clinical and hygiene training programme. S/He will carry out specific clinical training for Master Trainers and will assure that they are mentored into competent trainers of trainers. S/He will design one practical dairy and meat hygiene training curriculum for veterinarians and one or more dairy and meat hygiene curricula for extensions and will provide relevant clinical medicine and surgery training in her/his areas of competence.

2. Scope of services and duties

The International Veterinary Clinician Trainer shall implement works described in the Terms of Reference and scope of services. The main duties of the IVCT include the following:

- Evaluation of existing training materials in dairy and meat hygiene as well as in clinical medicine to identify gaps and make relevant recommendations;
- Development of training modules in dairy and meat hygiene including guidance for the trainer and for participants as well as the slides for presentations;
- Design one practical dairy and meat hygiene training curriculum for veterinarians
- Design one or more dairy and meat hygiene curricula for extensions;
- Provide relevant clinical medicine and surgery training in her/his areas of competence.

3. Qualification and experience

The International Veterinary Clinician Trainer should meet the following qualification criteria:

- Advanced university degree in veterinary science;
- At least 10 years of private practice experience in a mixed food animal/companion animal rural practice.
- Experience in the programs or projects implemented under IFAD or other donor-funded projects is an asset;
- Experience in preparation of the strategy, programs or projects on Continuous Veterinary Education;
- Experience of work with the state structures, non-governmental organizations and private companies;
- Experience of preparation, organization and conduction of various training, consultations and other information and technical assistance on dairy and meat hygiene;
- Work experience in Central Asian countries is desirable;
- Good knowledge of verbal and written English; knowledge of Russian is of preference
- Good communication skills; computer literacy is a must.

Technical Assistance & Subject Matter Specialists:

Short-term technical assistance will be contracted from qualified professionals for training and mentoring on subjects including: clinical diagnosis and preventive medicine, obstetrics and gynecology, post-mortem diagnosis, disease investigation and disease treatment and prevention in livestock (including horses) and companion animals. Specialist in applied pharmacology, ultrasound diagnosis of pregnancy, veterinary business management or other specialties may be recruited as required. These subject matter specialists will deliver short-course training and refresher training and draft training curricula (in Russian or English).

Attachment 4.1.1. Terms of Reference for the Business Advisory Service Provider

Project Description

Objectives

Throughout the proposed assignment (the "Assignment") ongoing advisory support (coaching) is to be provided to [LE NAME] The Assignment is aimed at implementing changes in several business areas and stepping up the business as a whole. More specific objectives will be defined during the diagnostics and planning phase of the Assignment and summarized in the work plan.

Scope of Services

The Assignment scope includes the following tasks:

- Document review
- Identification of three key improvement areas, that may include the following:
 - Finance
 - Operations, systems and quality management
 - Sales and marketing
- Preparation of work plan
 - Advisory and coaching on the 1st key improvement area (Finance)
 - Advisory and coaching on the 2nd key improvement area (Operations, systems and quality management)
 - Advisory and coaching on the 3rd key improvement area (Sales and marketing)

Implementation Arrangements

Assignment Timing

The Assignment is planned to last 8 months. The Assignment will start [DATE] and should be completed by [DATE].

The consultant will be engaged in the Assignment implementation for up to [NUMBER] working days, including up to [NUMBER] working days for the diagnostics and planning phase.

Schedule

The tentative implementation schedule is as follows; a more detailed Schedule will be submitted as part of the work plan at the end of Phase 1, to include the list of planned activities for Phase 2 and related deliverables.

ACTIVITY / MONTH / WEEK	MONTH							
	1	2	3	4	5	6	7	8
Phase 1: Diagnostics and planning								
1.1. Document review								
- <i>Review of existing business plan or other relevant documents</i>								
- <i>Assessment of current business state, local/ international trends</i>								
- <i>Calculation of key ratios, analysis of trends</i>								
- <i>SWOT analysis</i>								
- <i>Verification of growth potential</i>								

1.2. Preparation of work plan									
- Preparation of Business Diagnostics Scorecard									
- Identification of three key improvement areas									
Phase 2: Implementation of on-going advisory support and coaching									
7.1. Advisory and coaching on the 1st key improvement area (Finance)									
7.2. Advisory and coaching on the 2nd key improvement area (Operations, systems and quality management)									
7.3. Advisory and coaching on the 3rd key improvement area (Sales and marketing)									
7.4. Final report submission									
Review Meetings									

Consultant Selection

The consultant selected for this Assignment is [NAME] specialized in the areas [FOR EXAMPLE] of market analysis, marketing strategies, strategic planning, financial analysis and management, restructuring projects and HR management as well as delivery of corporate trainings. The consultant has been selected from the pool of SBS pre-qualified consultants by the beneficiary enterprise. Following experts will be engaged in Project implementation by [NAME]

Individual Name	Expert	Specialization	# of days	Rate	Total
		Sales & Marketing Expert (Project Coordinator)			
		Finance and Operations Expert			
Total Direct Cost					

Deliverables and Reporting

The consultant is expected to follow the deliverables and reporting requirements as agreed with the beneficiary enterprise and the EBRD's SBS country team in Bishkek, Kyrgyzstan.

In line with the scope of services and Assignment implementation schedule, at the end of Phase 1 the consultant is expected to deliver a work plan. The work plan will cover planned activities, a timeframe and deliverables for the ongoing business coaching in subsequent phases of the Project. Upon completion of the assignment, a Final Report will be submitted summarizing the progress reports submitted at the interim stages, recommendations made throughout Project implementation, changes implemented and also further actions to be taken by the enterprise management.

The course of Assignment implementation will be monitored by the SBS Kyrgyzstan team; 4 review meetings will be held with the beneficiary enterprise and consultant.

Budget

The total cost of the Assignment is [AMOUNT] KGS.

Attachment 4.1.2. Terms of Reference for the Business Clinic

Background

Objectives of the consulting services

The overall objective is to improve the marketing skills and knowledge of local entrepreneurs, in particular women and youth, and promote the benefits of business advisory services. The Assignment is designed to build strong demand for local consultancy services.

The specific objectives of the Assignment are as follows:

- Conduct a series of 5 one day thematic seminars focused on marketing for up to 30 targeted participants;
- Conduct individual coaching sessions with up to 25 entrepreneurs to identify marketing issues facing their enterprises and provide them with professional advice and recommendations;
- Inform local entrepreneurs about opportunities available through the Assignment leading to identification of at least 3 potential projects with local consultants.

It is envisaged that the Assignment impact will be assessed against the following criteria:

- Increased number of new advisory projects – at least 3 projects with local consultants will be identified;
- Increased number of women-managed enterprises that engaged a consultant without a grant following the ATMP;
- Number of projects being undertaken in more sophisticated areas/new value chains.

Scope of services

The business clinic will comprise two formats: a series of five seminars on marketing as well as one-to-one coaching sessions for entrepreneurs with a specific focus on women and youth. The Assignment will consist of the following stages:

1. Preparation

The Consultant shall develop a detailed seminar programme and training materials for the five one-day seminars. The seminars will cover marketing components and factors, role of marketing department at the company, market research, competitive advantages, their development and distinction from the competitors, peculiarities of work with private and corporate customers, marketing strategy, sales management, development of new product, product promotion, merchandising, branding and promotion, and e-Marketing.

The Consultant will tailor the programme and materials to the profile of the participants at each seminar. Potential participants will be invited by SBS to fill out an application form providing information about their companies, specifying their preferences for the seminars, and expressing willingness to participate in the coaching session. The application forms will be reviewed by the Consultant. The Consultant will identify the topics of the seminars based on this information.

The Consultant will develop the list of participants of the seminars and coaching sessions upon receipt of application forms. The participants of the seminars and coaching sessions will be selected based on the typical SBS criteria for enterprises. Only business owners and managers will be invited to the seminars and coaching sessions. The Consultant will agree participation list for each seminar and coaching session as well as the topics of the seminars and training materials in advance with the SBS Kyrgyzstan team.

2. Implementation of the seminars

The Consultant will deliver 5 one-day seminars on marketing. The Consultant will use interactive methodology conducting training sessions. The Consultant will encourage active involvement of participants in all discussions and activities. The Consultant will use the following techniques to reinforce the learning process: interactive mini-lectures and presentations, business and role plays, individual assignments, question and answer sessions, guided group discussions, review and analysis of case studies, work in small groups, etc.

Participants of the seminars will receive hand-outs for individual use and information about additional literature to be studied independently. At the end of each seminar the participants will fill in evaluation forms to provide feedback on the contents of the seminars, consultants, and ideas for similar events in the future.

The Consultant will ensure that SBS promotional materials are disseminated among participants and that there is adequate opportunity to provide additional information about SBS activities in Kyrgyzstan and how to start a project afterwards.

3. Implementation of the Coaching sessions

The Consultant will conduct 25 one-to-one coaching sessions of at least one hour with selected business owners and managers who attended the seminars. The Consultant will propose the list of candidates for the coaching sessions and agree with the SBS Kyrgyzstan team in advance. It is envisaged that the seminars and coaching sessions will be conducted in parallel with the coaching sessions starting on the first or second day of the seminars.

Participants of coaching sessions will be able to receive a consultation on marketing related issues delivered by the Consultant. The consultant will analyze the concrete needs of the business and provide professional advice on actions to be taken. The expected result is the development of a short action plan for each participant.

Implementation arrangements

It is envisaged that the Assignment will take place in [LOCATION] in [DATE]. The Assignment delivery will be spread over [NUMBER] months comprising of seminar preparation, delivery of seminars and coaching sessions and final report preparation. The Consultant will be responsible for the implementation of the seminars and coaching sessions, as follows:

example only

Assignment stage	Results	Duration, days
1. Preparation for seminars	Programme for training sessions designed; training participants identified; participants' profiles reviewed; training materials developed	4 days
2. Delivery of seminars and coaching sessions for local entrepreneurs	5 full-day seminars on the marketing modules identified by the participants, 25 coaching sessions conducted	10 days
3. Evaluation	Final Report developed (includes evaluation of each component of the project and recommendations for similar events in the future)	2 days
Total days		16 days

The SBS team will be responsible for gathering applications and organising the venue for the seminars and the coaching session. Participants will be required to pay a contribution (KGS [AMOUNT] per person) to attend the seminars and coaching which will be collected by SBS through the [COMPANY NAME], a local consulting company.

Deliverables and reporting

Budget

Attachment 4.1.3. MoU between APIU and RKDF

MEMORANDUM OF UNDERSTANDING
BETWEEN
AGRICULTURAL PROJECTS IMPLEMENTATION UNIT
(UNDER THE MINISTRY OF AGRICULTURE AND MELIORATION)
AND
THE RUSSIAN-KYRGYZ DEVELOPMENT FUND
WITHIN
THE ACCESS TO MARKET PROJECT
OF THE INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

1. Introduction

The Agricultural Projects Implementation Unit (APIU) under the Ministry of Agriculture and Melioration (MoAM) of the Kyrgyz Republic implements the Access to Markets Project (ATMP) funded by the International Fund for Agricultural Development (IFAD), and the Government of the Kyrgyz Republic. The Project will last for __ years (20__ - 20__).

The goal of the ATMP is to contribute to increased incomes and enhanced economic growth in pastoralist communities. The Project objective is improved access and integration of smallholder livestock farmers with remunerative markets for their products, leading to improved and equitable returns.

The Project's investments and activities will be executed through three components in addition to Project Management:

1. Livestock Value Chains Development Component, the outcome of which will be "capacity for sustainable, efficient livestock production, processing and marketing enhanced";
2. Livestock Value Chains Financing Component, that will have the outcome of "efficiency and profitability along targeted smallholder-inclusive livestock value chains increased"; and
3. Upgrading the Kyrgyz Livestock Sanitary System Component, that has the objective to strengthen key public and private sector arms of the Kyrgyz Veterinary Services, which facilitate livestock commodity trade and safe food.

The Russian-Kyrgyz Development Fund is an international institution established in 2014 per the Agreements between the governments of the Kyrgyz Republic and the Russian Federation "On the development of economic cooperation in the conditions of Eurasian economic integration" and "On the Russian-Kyrgyz Development Fund". The goal of the Russian-Kyrgyz Development Fund is to promote bilateral economic cooperation, modernization and development of the Kyrgyz economy, and the effective use of opportunities arising from the participation of the parties in Eurasian economic integration.

Herein:

- The Agricultural Projects Implementation Unit (APIU) under the Ministry of Agriculture and Melioration (MoAM), hereinafter referred to as "APIU" on the one side; and
- The Russian-Kyrgyz Development Fund, hereinafter referred to as "RKDF", on the other side,

came to a general agreement to ensure the timely and quality implementation of the Livestock Value Chains Financing Component (Component 2), the purpose of which is to enable livestock value chain actors to increase their investment in profitable livestock value chains through the provision of grants (under Component 1) and by linking them with external credit lines.

2. Purpose of the memorandum

The purpose of this memorandum is to define a framework of cooperation and collaboration of the parties, where the Project Financing Agreement between IFAD and the Kyrgyz Republic and the Project Implementation Manual are the basic project documents and an integral part of this Memorandum.

3. Rights and responsibilities of the parties

3.1. APIU will:

- Designate a staff person in charge of the APIU – RKDF cooperation;
- Work to prepare about 100 value chain development business plans and loan applications of livestock businesses for funding by RKDF – in line with RKDF's adjusted lending conditions and requirements (see below);
- Train at least 100 processing/aggregator enterprise owners, enterprise managers, and production managers in business, processing technology, marketing and value chain management, to help strengthen their businesses and increase creditworthiness;
- Facilitate other activities to improve agricultural practices (including but not limited to:
 - Training beneficiary farmers and livestock husbandry workers in improved livestock husbandry, health, nutrition and hygiene;
 - Training processing/aggregator enterprise owners, enterprise managers, and production managers in business, processing technology, marketing and value chain management;
 - Providing capacity building through training and on-farm demonstrations, piloting of innovative and climate smart technologies, targeted advisory services and exposure to the best international practices through the participation in study tours and trade fairs;
 - Strengthening of the linkages between raw material producers and agribusinesses and the improvement of the governance within the chain;
 - Testing innovative livestock production or processing technologies;
 - Involving new households i in producer groups in value chains;
- Provide about 250 grant packages funded by IFAD (per Component 1 targeting);
- Organize gender and poverty awareness trainings for staff of the beneficiaries' businesses and designated staff of RKDF;
- Exercise the overall monitoring and evaluation of the project activities (M&E) including baseline surveys and impact surveys, knowledge management and communication; this may include monitoring of additional indicators as requested by RKDF and sharing the monitoring reports with RKDF (see Section 5 of this MoU);
- Ensure the implementation of the RDKF rights and responsibilities set forth in this memorandum.

3.2. RKDF will:

- Designate a staff person in charge of the APIU – RKDF cooperation;
- Provide APIU with RKDF's lending conditions and a list of documents necessary to apply for a loan;
- Adjust RDKF's lending conditions to account for the specifics of the ATMP target group; specifically, this refers to the minimum loan threshold (around US\$ _____ per one loan), minimum age of a business (___ years), as well as loan purpose (for example, for refinancing purposes) and other conditions and requirements;

- Advise on the preparation of the loan applications so that they meet adjusted conditions and requirements of RKDF;
- Accept and review loan applications submitted by the APIU for agricultural borrowers – target group of the ATMP – within a reasonable amount of time;
- Provide direct loan funding of those applications that meet RKDF's adjusted conditions and requirements;
- Have a right to reject any loan applications based on objective evaluation;
- Advise APIU on the reasons for rejection and suggest the ways to improve rejected applications;
- Allocate up to US\$ ____ million of loan funding for ATMP beneficiaries;
- Ensure the provision of loans to ATMP beneficiaries in local currency (unless requested otherwise by the borrower);
- Offer ATMP beneficiaries loan repayment schedules meeting the cash flows of their agricultural businesses (including reasonable grace periods and the payment frequency corresponding to cash inflows);
- Provide quarterly reports on the state of the loan portfolio funded within APIU – RKDF cooperation; specifically, this includes data on amounts disbursed and lending conditions (loan term, grace period, interest rate, repayment schedule), outstanding loan balances, portfolio at risk over 30 days for the outstanding loans, and the loan write-off rate). The reports are to be shared with APIU within ____ days after the end of each calendar quarter;
- Participate in gender and poverty awareness trainings organized by APIU.

4. Cooperation conditions

- 4.1.** All costs related to borrower training, capacity building, grant packages and other activities will be borne by APIU based on the ATMP design documents approved by IFAD and the Ministry of Finance of the Kyrgyz Republic. APIU will also pay for gender and poverty awareness training. All such expenditures are made under the procedures of the IFAD financial management and the Kyrgyz Republic legislation, as well as the terms of the Project Implementation Manual. APIU will not request any compensation of such costs from RKDF.
- 4.2.** All costs related to the loan disbursement and collection, including any costs related to loan loss provisions, loan delinquency and loan default, will be borne by RKDF. RKDF will not request any compensation of such costs from APIU, including that in the form of loan guarantee.
- 4.3.** The parties will work together to develop a tentative plan for the preparation of loan applications and loan disbursement.

5. Monitoring and evaluation (M&E) system

5.1. M&E tasks

APIU will regularly monitor the progress of the project activities and outcomes, objectives and goals taking into account both quantitative and qualitative indicators of the logical framework. M&E methodology to control the implementation of project activities up to its logical conclusion will be described in detail in a separate document - M&E Guidelines.

5.2. Mechanisms, methods, timing of M&E

Monitoring and evaluation of the project will be carried out according to the indicators described in the logical framework of the project and additional indicators approved by the APIU and IFAD.

6. Communication

Parties should regularly inform and consult each other on matters of common interest and mutual cooperation.

7. Prevention and resolution of disputes

Any disputes arising from the execution of items in this “Memorandum of Understanding” will be resolved through negotiations between the parties.

8. Duration of the Memorandum

This Memorandum shall enter into force on the date of its signing and is valid until the end of ATMP.

This Memorandum is signed on “_____” _____, 20____, between:

APIU:

RKDF:

Signature: _____

Signature: _____

Annex 2: VCDBP and GP Selection Process

For each ATMP identified LE interested to build his/her business, a value chain development business plan (VCDBP) would be prepared by experienced private sector business specialists, including all envisaged activities within the value chain. The VCDBP analysis would include: (i) a situation analysis including a detailed assessment of expected smallholder farmers' participation; (ii) opportunities to upgrade; (iii) constraints to upgrading; and (iv) recommendations on what can be done practically and what instruments to use. The VCDBP would list the potential types of investments eligible for ATMP support and each type of investment would be accompanied with a realistic business model/financial analysis. Associated value chain capacity building investments financed, e.g. technology innovation, training of farmers or enterprise staff/management, organizing farmers into groups, etc., would also be identified and financed directly by the ATMP.

The selected entities will be asked to submit the Value Chain Development Business Plans. Towards this, the Project will provide dedicated business advisory services to assist the candidates in elaboration of such business plans.

The Value Chain Development Business Plans will be ranked by the APIU and the Selection Panel on the following but not limited to criteria:

- number of established productive partnerships;
- number of involved smallholder farmers, women occupying managerial positions and employed youth;
- mitigation of side-selling, especially the incremental returns for smallholder producers;
- biosecurity and food safety gains
- neutral or positive environmental impact.

Following this criteria-based evaluation of VCDBPs, eligible packages might be subject to grant financing by the ATMP or submitted to Participating Financial Institutions (PFIs) that meet IFAD due diligence requirements (further details under Component 2). Sequencing of VCDBPs' implementation will be based on a first come - first serve principle.

Only legally registered societies and companies (LLC or LTD) would be eligible to act as LEs for the ATMP supported livestock value chain development. Due diligence would be performed and entities that are the subject of bankruptcy, criminal investigation, fraud, corruption or are in default of contractual agreements would be ineligible. Incremental household income and jobs, value added products, and productivity and market access and gender equality would be important criteria in investment proposal evaluation, together with commercial viability, environment impact and cost effectiveness assessments. The investments would be underpinned by a technical, business management, accounting and Information Communication Technology (ICT) capacity building programme for participating enterprises with a view to improving their farmer service capacity, profitability and enterprise linkages, both at local level and to upstream quality suppliers and markets. Farmers would receive training in livestock husbandry, health and nutrition, fodder production and other technology innovations, environment protection and in "farming as a business".

The VCDBP financial analysis would include: (i) cost benefit analysis at relevant key points of selected value chains using with and without investment scenarios; (ii) for medium term capital investments (more than US\$ 10,000), the estimation of NPV and IRR; (iii) full financial and economic analysis of investments by intermediary enterprises, including monthly cash-flow/working capital analysis during the first years to avoid liquidity problems and development of a small business plan; (iv) investments by processing enterprises would be supported by a well-articulated business plan, which can also be used by these enterprises for implementation of the investment – the business plan would including detailed financial and economic assessments and social and environmental impact assessments and monthly cash flow/working capital analysis; and (v) an economic multiplier impact assessment for the selected value chain. Approved VCDBP investments would have an

accompanying Chart providing the time line for all activities to be supported by the ATMP, that would also identify the responsible party, place and time and how it is measured.

Legal lead enterprises eligible to apply for ATMP financing include: (i) sole proprietor/individuals; (ii) cooperative societies/associations; (iii) partnership; and (iv) companies. Eligible entities should be able to provide the following documents:

- Business License
- Certificate of registration and extract from Registry
- Annual tax Return Report (2 years for existing entities)
- Statutory Chart
- Permission for the ATMP to collect information from trade partners.

None of the above entities shall be eligible for support under the following circumstances:

- Having gone bankrupt or being liquidated; having its operations managed by courts; signing agreements with creditors, having its operational activities suspended; being subject to procedures concerning these matters or being in a condition due to a similar situation as per national laws or arrangements;
- Being sentenced for offences related to their own business which cannot be appealed;
- Being convicted of gross abuse related to business matter;
- Non performing obligations related to the payment of social security contributions or tax payments in accordance with the legal provisions in Uzbekistan;
- Being subject to adjudication due to being involved in fraud, corruption, a criminal organization or other illegal activity, which cannot be appealed.

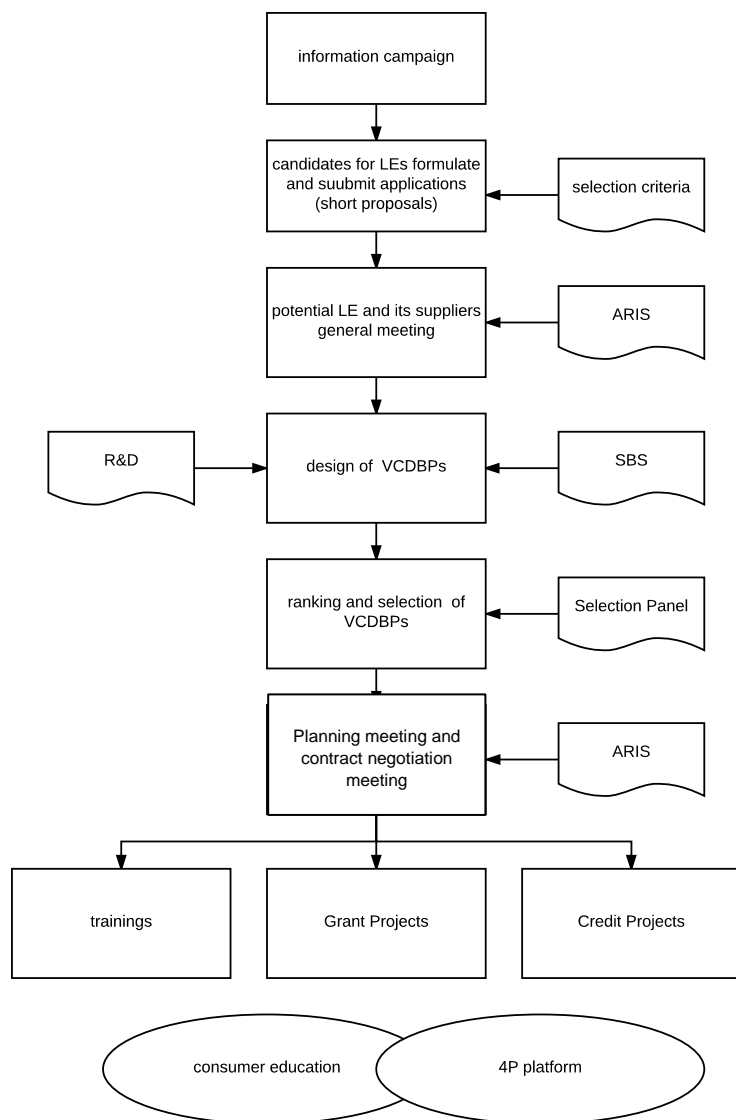
The ATMP will not finance the following expenditures:

- Leasing of equipment, land and facilities;
- Bank charges, cost of guarantees and similar charges;
- Value of intellectual property rights;
- General costs involved in an investment Project proposal development/design (architects', engineers', consultants' and general legal fees, and costs for acquisition of patents and licenses, etc.).

The development of a VCDBP would not be a guarantee of ATMP financing. VCDBPs would be ranked by the APIU against key Project indicators and only those VCDBPs meeting minimum ATMP requirements would be used as a framework for preparation of individual Grant Projects or/and Credit Projects to be further presented to Selection Panel for GPs or/and forwarded to PFIs for consideration of CPs. Selection Panel will be validating the recommendations of the APIU for GPs financing, while it is solely PFIs' decision to whether finance or not to finance all or part of the CP private good investment. APIU's recommendations for GPs financing will be based upon assessments made against key Project criteria and in accordance with the PIM.

Criteria for ranking VCDBPs would include, *inter alia*, the number of smallholder farmers in the aggregation scheme; the scale and focus of LE investment including level of own capital contribution, the profitability of the proposed investments, the raw products purchase price schedule, level of gender inclusion, decent job creation, the participation of input suppliers and service providers, and the potential for future upscaling.

The workflow around the VCDBPs preparation and implementation is summarized in a chart below.



Explanatory notes to the chart:

- Possible partners for the information campaign include: Association JIA, Veterinary Chamber, aki.press, apex of pasture committees.
- The main purpose of the meeting between an agribusiness and its current/potential suppliers is to understand the willingness of parties to work together. ARIS should play a key role at this stage of the process. It is strongly recommended that this meeting is followed by two training events: 1) Doing Business Together; 2) Best Practices & Techniques (shall include an input from the Research Institute, e.g. on genetics, alternative energy sources use, use of agricultural by-products in animal feeding). This will ensure full understanding on the roles and responsibilities of all value chain participants.
- VCDBP shall be formulated by the applicants for the role of the LE with the assistance on the Small Business Support team of EBRD Kyrgyzstan. The selection criteria for these business plans shall include (in addition to project indicators) the number of small-scale producers of raw material/live animals benefitting from VC upgrade; availability of skilled staff at the candidate for the LE; measures to comply with the biosecurity and food safety standards of the EAEU; measures to address the issue of patchy supply.

- The planning and contracts formulation meeting shall be facilitated by ARIS with the input of a legal expert on issues related to (i) producers' organizations, (ii) supply legal arrangements.
- The background work with the end consumer (education on food safety and nutrition) and the proposed Platform bridging agribusinesses and farmers are crucial to create the enabling environment for the Partnerships to develop.

Attachment 4.2.1. TEMPLATE FOR PREPARING A VCDBP

Step One: Data Collection

The value chain analysis team first conducts gender disaggregated background research on the expected raw products catchment area, reviewing the structure of animal production and processing in the catchment, the availability, type, quality and use of agricultural land and pastures, market demand and public and private institutional and financial support. After a thorough review of relevant secondary sources, the team conducts primary research in the catchment through a combination of one or more of the following methods: interviews of male and female farmers, focus groups, surveys and observation. Through this process which takes approximately 1 week in the field, the team gather more information on the value chain including the actors (household and peasant farms, SMEs – processors, input suppliers, advisors, financial institutions, etc.), the relationships between the actors of the chain and factors affecting the competitiveness of the chain.

Step Two: Value Chain Mapping

By using the information gathered during interviews as well as secondary research, the value chain analysis team develops the map of the value chain. Value chain mapping enables the analysis team to visualize the flow of the product from conception to end consumer through various actors, as well as the supporting markets and enabling environment affecting the value chain. The first step is to list all the functions and actors in the value chain.

- *Who are the actors in the commodity value chain?*
 - Input suppliers and service providers (companies who sell inputs and services to farmers)
 - Producers (male and female farmers)
 - Small-scale traders
 - Small-scale processors –local sale
 - Medium/large-scale processors-national sale
- *Functions may be performed by more than one actor, and each actor may perform more than one function. What are the functions in the commodity value chain?*
 - Input and service supply
 - Production
 - Trading
 - Processing
 - Exporting
 - Importing

Once they are identified, the functions and actors are placed in a matrix to show who does what. *List* the functions along the side and the actors across the top and mark the boxes to indicate which actors perform which functions. Once this table is complete, a map can be drawn showing how the product moves from one actor to another and when it passes through the different functions. Based on the map it is possible to establish the cost and margin make-up for each level the produce passes through, to be used as the base line for present distribution of cost and benefits among actors.

Step Three: Analysis of Opportunities and Constraints

The next step would be to prepare a table like shown below, list the structural and dynamic factors in the value chain, and then briefly describe the current situation, opportunities, constraints and recommendations for addressing the constraints including tangibles: How, Who and Financing.

Framework	Situational analysis	Opportunities for Upgrading	Constraints to Upgrading	Recommendation for Upgrading Constraints (How, who and financing)
Structural Elements of the Value Chain				
End market				
Business enabling environment (both soft and hardware)				
Vertical linkages				
Horizontal linkage				
Supporting markets				
Dynamic of the Value Chain				
Value chain Governance				
Inter-firm Relationship				

Step Four: Prepare Brief Sample Business Models for Each Recommended Upgrading showing the expected Results of the Upgrading

This step included technical description of the upgrading, financial analysis, economic analysis listing all the incremental estimated forecasts e.g. increased farm household income, number of households benefiting; job creation; import substitution; etc.

This step should also include the preparation of a matrix showing the current cost and benefit make-up and profit distribution along the value chain and an evaluation of change in governance after upgrading.

Step Six: Stakeholders Workshop

The stakeholder workshop brings together key actors from various levels in the value chain to vet the findings of the analysis and discuss if the chosen strategy for increasing value chain competitiveness is valid.

NOTE: The VCDBP should be as precise and concise as possible, not exceeding 20 pages. Please refer to the Rapid End Markets Assessment (February 2016) for good example how to structure a value chain map.

Annex 3: The Kyrgyzstani Agribusiness Map

Dairy Industry (plants operations as of October 2015)

Source: *stat.kg*

Medium- and large-scale dairy plants in Kyrgyzstan

DAIRY INDUSTRY National overview



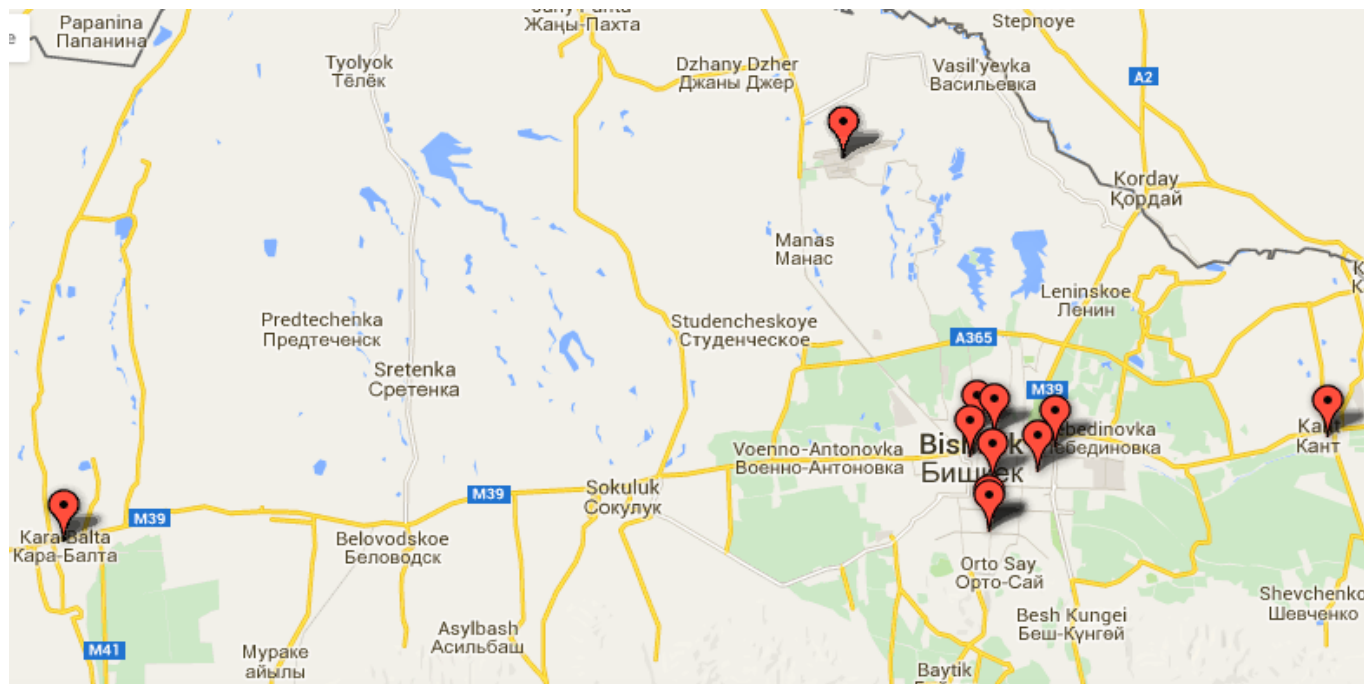
Meat and Offal Processing Industry (plants operations as of March 2016)

Source: *stat.kg*

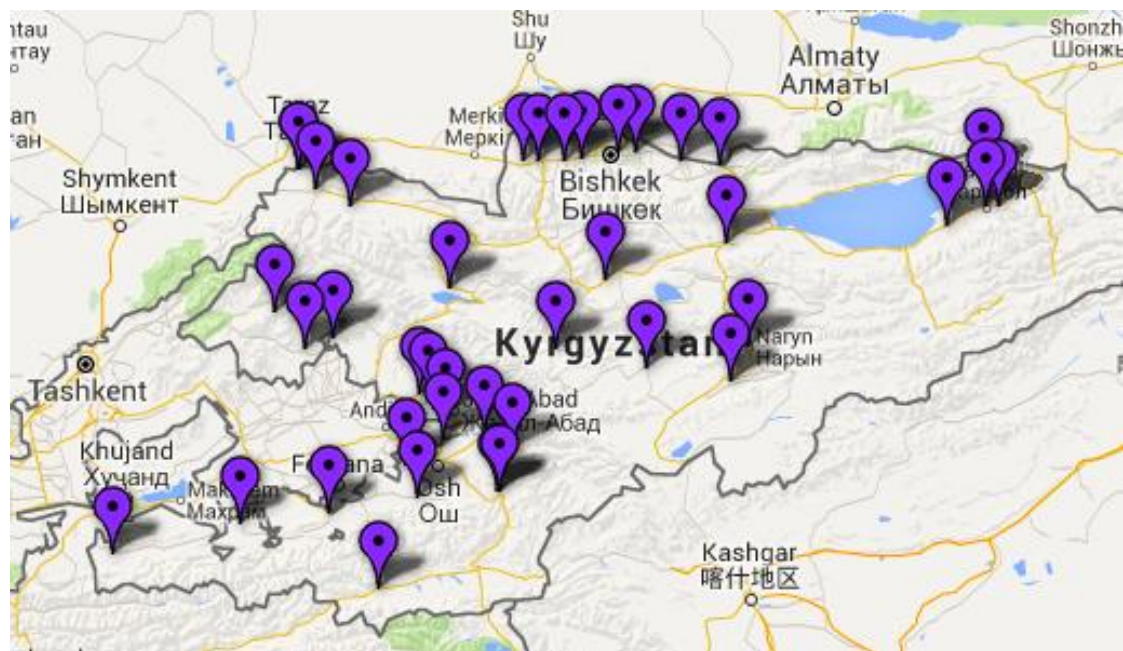
EXISTING MEAT PROCESSING FACILITIES National level



Same map zoomed:



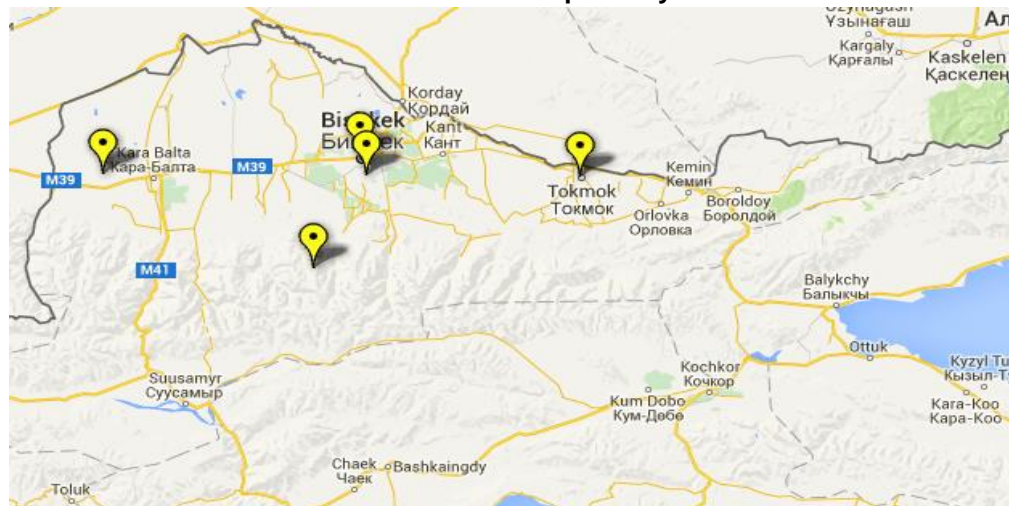
PIPELINE MEAT PROCESSING FACILITIES (source: Meat Union)
National level



SLAUGHTERHOUSES National view



Zoomed to the capital city



TANNERIES National level



Zoomed area



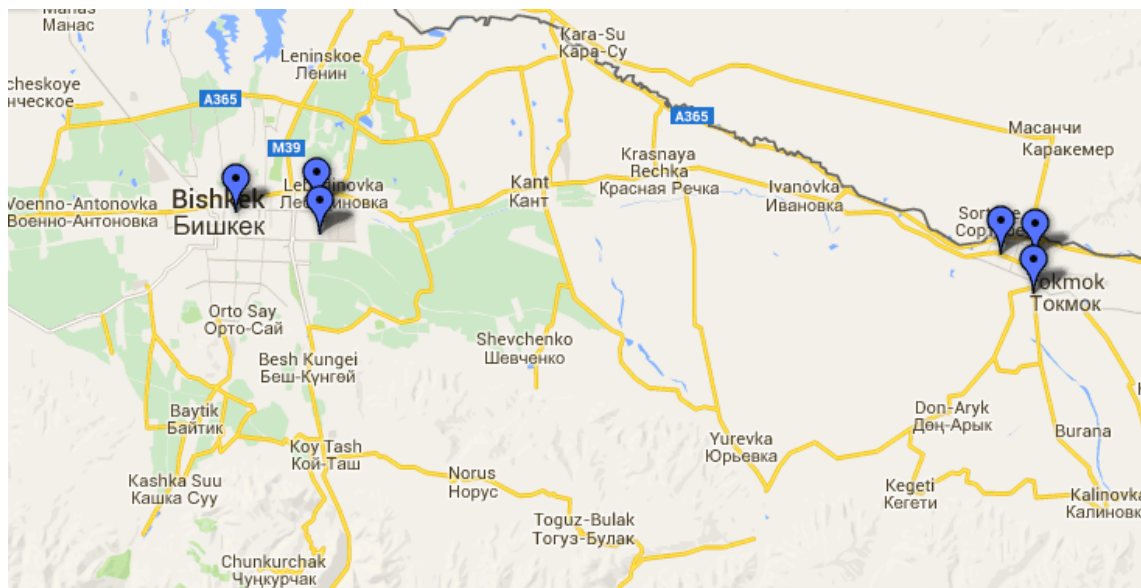
Wool spinning and weaving Industry (plants operations as of October 2015)

Source: *stat.kg*

National level



Zoomed area



Annex 4

Executive summary of the Rapid End Markets Assessment for Livestock Products

Cow Milk Value Chain

The main challenge to the Kyrgyz dairy industry development is the insufficient raw material base (99% of raw cow milk is supplied by farming households), due to low milk yields, high seasonality of supplies and little control over biosecurity and food safety. At the same time, the national dairy industry is growing fast, thanks to the private sector investment, the development of modern retail formats, and new market opportunities within the Eurasian Economic Union. The Kyrgyz agribusinesses operating in the dairy sector ensure some USD 12 million or 11% of the country's agri-food export value. Notwithstanding, even if Kyrgyzstan exports 42% of the produced milk, 80% of the export quantity is a low-value product (liquid pasteurized milk in bulk). Moreover, non-performance of anti-epizootic measures in the country compromises the national and the regional biosecurity and public health.

Only 1% of milk produced in the country is collected to undergo industrial processing, and the industry struggles to secure its daily raw material needs. Should farming households and the aggregation function of the value chain undertake an upgrade to comply with the industry's standards, milk producers would establish the direct linkages with the dairy factories and benefit from the milk procurement higher prices, currently enjoyed by the middlemen. With regards to smallholders, provision of external support is necessary to organize farmers, improve their farming practices (animal health, feed, hygiene), and establish – in close coordination with the dairy plants - the optimal network of milk collection centers to reach as many smallholder as possible. Along the chain support is needed to ensure adequate cold chain management, milk quality control off-farm and along the supply chain, and provide competent advisory services to all value chains participants in an easy and timely manner. Some dairy processing companies already work with the supplying households to improve their milk yields, flatten milk's seasonality and also pay price premium for better quality milk / winter supplies.

These efforts need to be holistically supported using the best farming practices to promote local cattle breeds, improve pastures' health and provide decent jobs in the countryside for youth and women. Smallholders will entrepreneurial skills will have good possibilities of becoming commercially oriented dairy farmers. However, the most urgent upgrade that the dairy – and other animals sourced foods – chain requires is the compliance with the stringent biosecurity and food safety protocols and these are unlikely to be designed / implemented by smallholders themselves.

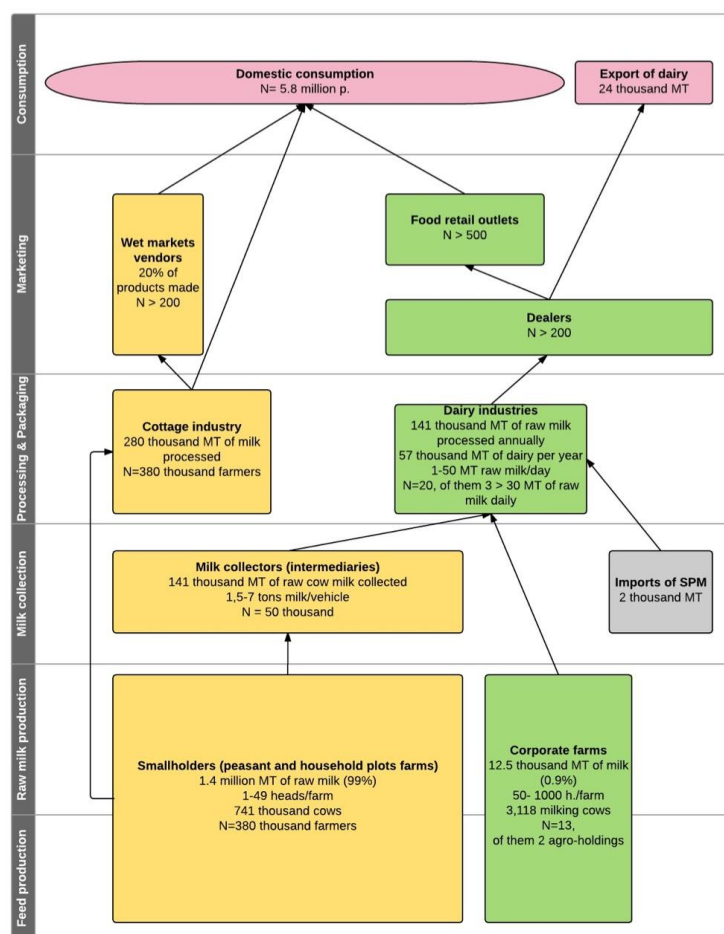


Figure 1 - Dairy value chain map

Beef

Kyrgyzstan produces around 100 thousand tonnes of beef, distributed almost evenly between households and peasant farms. Production system includes use of remote pastures in highlands (from May to October) and fattening period at farms or winter pastures. Cattle fattening is increasingly popular business: traders gather and transport roughly 80% of 18 months' bulls to the lowlands for fattening. Bulls are the main source of beef (85%) and often change several owners during its' lifetime.

Beef accounts 70% of households' expenditures on meat and demand on beef is growing faster than supply. Beef is mostly consumed fresh, and wet markets are the marketing channel for households.

Although official beef exports is very small compared to production, substantial number of live cattle was smuggled to Kazakhstan and other neighboring countries. In 2015, following devaluation of Kazakhstani tenge, unofficial exports has contracted. Increased supply pushed beef retail prices down to the 2014 level.

Meat processing industry is presented by 92 facilities and increased production by 47% during 2010-14, reaching 12.7 thousand tonnes. Usage of premium cuts for steaks is also seem to be emerging. There at least 2 suppliers of western-style cuts of beef that supply restaurants with local beef.

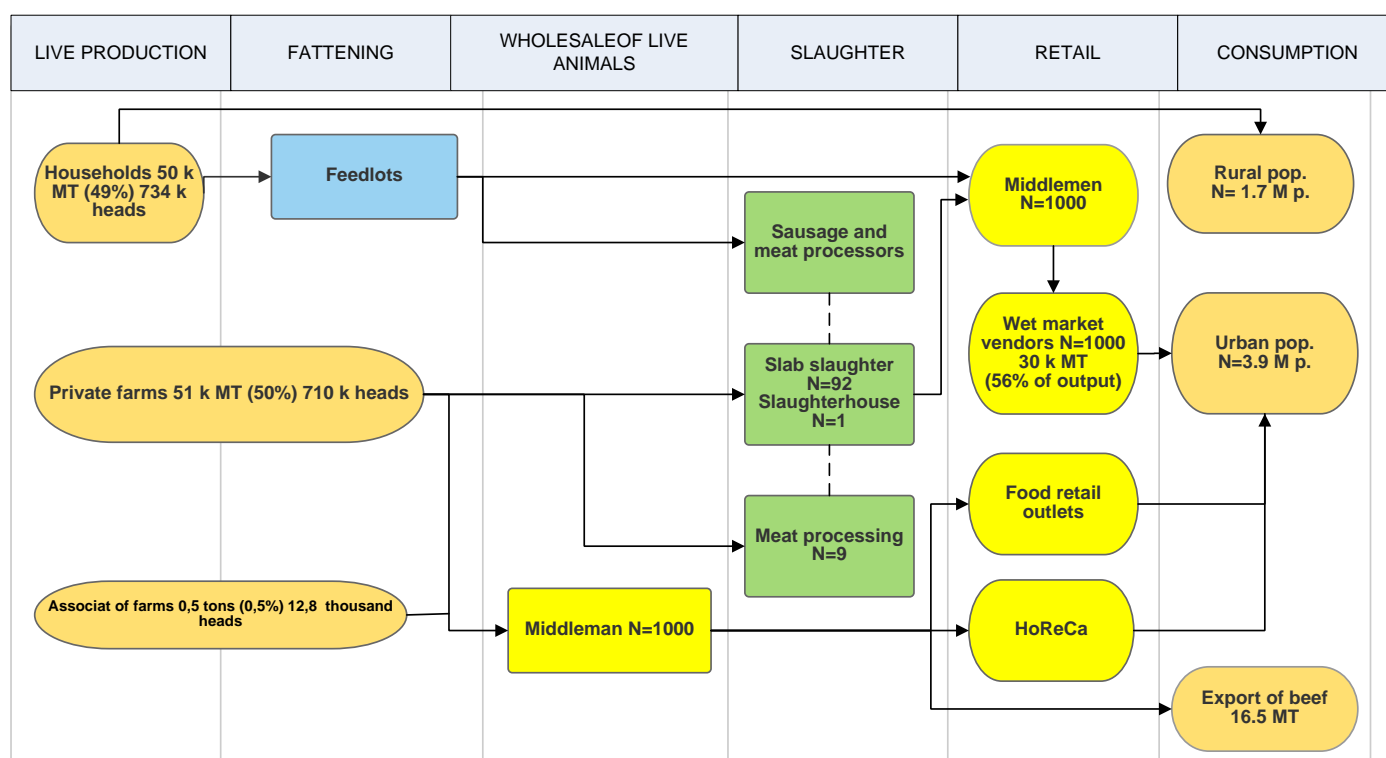


Figure 2- Beef value chain map

Mutton Value Chain

The domestic market of mutton is almost 100 percent filled by the local production. The major suppliers to the market are smallholder farms. Their access to the markets doesn't seem to be constraint as traders and livestock markets (animal auctions) are readily available and consumption rates are traditionally high. Low mutton prices are the major problem mentioned by producers. As the rapid value chain analysis showed, the existing market structure does not give any opportunity to lower traders' and bazaar sellers' margins. Marketing cooperation also doesn't seem to be an option as the traditional shopping format prevails for meat (live animal or meat cuts bought from a bazaar), in deference from other fast moving consumer goods like dairy.

The abundance of good pastures and water resources set the ground for a profitable extensive animal husbandry in Kyrgyzstan with a good potential to export mutton and lamb, including in the premium segment. Indeed, lamb fattened in the highlands is often considered tastier, healthier, and with a more pleasant odor. Kazakhstan, Russia and the Middle-East countries could potentially import the substantial amounts of such meat.

Weak biosecurity in the country is the key barrier for legal exports that sets the pre-condition for any development in the sector. According to the interviewed stakeholders, animal electronic identification system in soon to be implemented. The system is required to improve the control over animals movement and will improve the overall traceability of the animal source foods. Along with the livestock identification, substantial efforts should be made to improve animal health system.

Just as in case of beef, mutton value chain participants need undertaking an upgrade looking at

- ✓ temperature control (transport, storage, workplace);
- ✓ poor workplace environments;
- ✓ manual handling & hygiene;
- ✓ documentation, trace ability.

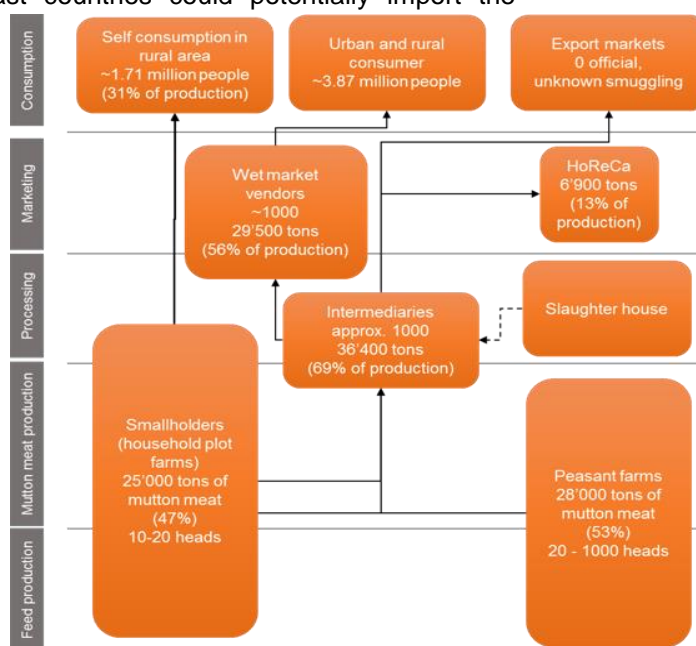


Figure 3 – Mutton value chain map

Fine Wool Value Chain

In case of Kyrgyzstan, within wool market, the fine merino wool (and meat of merino sheep) production has the highest potential for further development. Nowadays farmers became interested to breed the fine wool sheep as the incomes generated from this type of animal fiber have increased. The problem of cross-breeding and of the degeneration of fine wool quality has been mentioned several times during the interviews. Insufficient supply of fine wool limits development of the local primary treatment factories and of the textile enterprises.

The Fund for the Merino Sheep Breeding is providing support and promotes merino sheep breeding in Kyrgyzstan. The fund made experiments in linking fine wool producers to the world markets and finding proper marketing organizations that would encourage farmers to improve wool quality to obtain better prices.

Wool testing laboratory seems to be the most critical element for the industry upgrade. Based on quality test results, auctions among wool traders and processors would take place. The ability to differentiate wool parcels on quality and, consequently on price, would give a clear signal to the producers to move towards higher fiber quality.

Local industrial processing factories are challenged by the financial problems and changing ownership. The production statistics show that over the last five years, production of the primary wool textile products went down to zero.

Traditional handcraft production is developing quite well and gained a niche market abroad. Such initiatives need to be supported to ensure their sustainability, market- and environment-

wise.

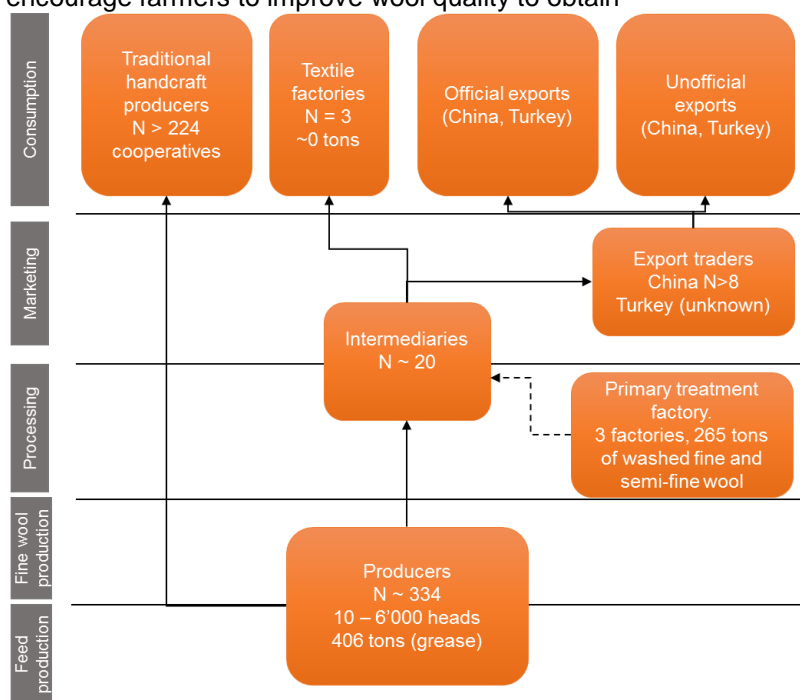


Figure 4 - Fine wool value chain map

Appendix 5: Institutional aspects and implementation arrangements

A. Implementation principles and governance

Introduction

1. There are several institutions that have been engaged in implementation of the AISP in the past and in the ongoing LMDP (I&I) and which will continue to be involved in implementation of the Access to Markets Project (ATMP), thus scaling up implementation approach of the LMDP in the ATMP. These institutions are now and will be acting as beneficiaries and service providers at the same time. It is essential that their roles are clear and do not overlap, and their activities are well coordinated. The two major institutions that are key to successful implementation of AISP and LMDP and other projects are the Agricultural Projects Implementation Unit (APIU) under the Kyrgyz Republic Ministry of Agriculture and Melioration (MoAM), and the Community Development and Investment Agency (ARIS), a large organization with outreach on the ground that focuses particularly on community-based initiatives and has a mandate to alleviate poverty. These institutions will have the prime implementation responsibility for the ATMP as well.

Project resource allocation

2. The ATMP seeks to improve the assets and incomes of livestock value chain stakeholders including smallholder farmers, agrifood processing enterprises, input suppliers and service providers and the rural unemployed by modernising livestock production in terms of technical and managerial efficiency and effectiveness gains at key points of the selected livestock value chains, namely: (i) capacity building of value chain stakeholders, especially women; (ii) innovative technology testing and development; (iii) improved access to client-tailored financial services; and (iv) strengthened livestock sanitary system. Project support would be delivered in the context of a management approach that is targeted, demand-driven and participatory.

3. The ATMP will be executed through a demand-driven approach, rather than the planning and definition of annually fixed targets. Incentives to participate will be promoted by the Project, i.e. the public sector (the push factor) while seeking the initiative and direct involvement of the private companies qualifying for the role of a Leading Entity (the pull factor). To this effect, the Project explicitly incorporates the following actions:

- 1) Facilitating 'smallholder farmer-to-agribusiness formal arrangements for the production of live animals / raw material according to the buyer's specifications, adequate aggregation and cold chain management, mentoring through the Project to facilitate the adoption of the new business models, etc.;
- 2) Facilitating the development of inclusive value chains (focus on small-scale producers, women-entrepreneurs and youth) and providing the advisory services required to formulate the VCDBPs for access to the Project's financing products (grants and credit lines);
- 3) Supporting and utilising the existing channels of financing lines while facilitating the asset-building;
- 4) Contributing to overall government's priorities and efforts to increase participation of private sector actors in country's economy, compliance with the EAEU technical regulation and diversification of agricultural businesses;
- 5) Through the Platform on PPPP, encouraging and supporting country dialogue on private-public partnership, whilst: (i) seeking the open societal awareness that would support the establishment of a financial, social and economic environment conducive to private

sector development; and (ii) espousing solutions to prioritized agrifood industry development concerns from the “bottom of the pyramid” upwards;

- 6) Establishing and supporting, both: (i) the ‘brokerage’ function, through an efficient ATMP technical team (i.e., ARIS, SBS, technical advisers, Value Chain Development Coordinator, Rural Finance Coordinator, Veterinary Coordinator, etc.); and (ii) a suitable M&E/KM system that will follow-up on the key outcome-output performance indicators.

Governance

4. The Project’s design incorporates various measures to assure good governance as indicated by overall operational accountability and transparency; financial management; procurement of goods and services; environmental governance; gender equality and mechanisms for complaints and remedies. These include: (i) the terms and conditions of MOU with all implementing partners; (ii) consistent stakeholder representation in the Project’s planning, M&E/ KM and impact assessment cycle, affording mechanisms for complaints and remedies; (iii) fair participation of women beneficiaries in all activities and levels of the Project; (iv) social, environmental and climate change safeguards and guidelines detailed in the PIM; (v) application of guidelines and procedures for procurement consistent with the current IFAD Procurement Guidelines; (vi) close supervision and implementation support by IFAD, including risk-based financial management supervision and operational reviews; and (vii) provision for regular external audit.

B. Organizational setting and arrangements for components implementation

5. The Project’s implementation aims at achieving the following three outcomes, through their corresponding components: **Outcome 1. Capacity for sustainable, efficient livestock production, processing and marketing enhanced; Outcome 2. Efficiency and profitability along targeted, smallholder-inclusive livestock value chains increased; and Outcome 3. Upgraded Kyrgyz livestock sanitary system.**

Component 1. Livestock Value Chains Development

6. Within two months of the Project start-up, the APIU will recruit a Value Chain Development Coordinator (VCD Coordinator) for coordination of activities to be implemented under Component 1. S/he will be initially supported by an international Value Chain Development Adviser (VCD Adviser) who would be contracted within three months of the Project start-up and who would help the APIU to detail the PIM (outlined in the Project Design Report) including TORs for all service providers and other consultants. TORs for VCD Coordinator and Adviser are presented in Appendix, Annex 1.

7. The ATMP proposes a “cluster” approach to implementation whereby agribusinesses benefit from the technical assistance and better raw material base and, where needed, access to client-tailored financial services, while smallholders increase their access to markets and incomes from their livestock. This approach will also provide for stronger farmer-agribusiness linkages that will eventually generate a range of positive externalities, such as improved animal productivity, better cold chain infrastructure, more jobs in rural areas including for youth, etc.).

8. The Project will be executed through a value chain-wise approach, whereby the entry point is the value chain champion also referred as a Leading Entity (LE). The ATMP will promote building viable business models (productive partnerships) and developing excellency in habit and trust among value chains actors. The Project aims at demonstrating that running the business models compliant with the international food safety standards is sustainable and credit-worthy. The ATMP will invite all interested value chain stakeholders to apply for the role of a LE.

9. The concept of a value chain champion refers to the willingness of a legal entity to invest time and resources (including non-economic resources, intellectual contributions, etc.) to increasing value chain competitiveness in a way that enhances benefits to small- and medium-scale producers. These entities are typically larger, financially stronger or more innovative firms, but the leadership can also come from a public-sector association or even a well-organized, skilled group of producers. Effective leadership necessitates transparent relationships with suppliers, a commitment to addressing

constraints to smallholders' participation in the value chain, and a willingness to work with other stakeholders to solve industry-wide problems.

10. **Community mobilization and mentoring** activities will be executed by ARIS. The latter will support civil society organizations and producer groups building on the experience of LM DP-1 and 2 and other development initiatives. Building on the results of the two earlier projects of IFAD in the country, this Project will promote close collaboration between the Pasture Users' Unions and agribusinesses. For example, improved road infrastructure may enable raw milk collection from the summer pastures that could result in significant incremental income for PUUs' members.

11. The APIU, ARIS and other Project partners will need to get familiar with the Rapid End Markets Assessment that provides a thorough overview of the bottlenecks along the various livestock value chains, especially the role of middlemen (e.g. milk traders) and primary producers situation.

12. **Preparation of VCDBPs and Business advisory services** to LEs will be channelled through EBRD's SBS facility with the ultimate goal to bring the businesses to the credit-worthy level. The support will be demand-driven and, based on the accumulated experience, will include for example quality management systems, marketing, financial management, international food industry standards.

13. **Training activities.** Within three months of the Project start-up, the APIU will recruit an international Livestock Value Chain Training Specialist who, in partnership with ARIS and nationally recruited specialists, will work with the future value chain champions to determine training needs and, within six months of Project start-up, prepare a detailed training programme including the identification of potential trainers.

14. Training programmes will include existing national and regional training products that have been evaluated and accepted as appropriate for the target audience and new training products developed by contracted individuals, faculties and institutes based on their respective competencies. The training curricula will be prepared by the tendered international service provider together with the national and regional specialists. Training material may be in the form of infographics, videos, concise manuals available to training beneficiaries in digital form. Identified trainers will receive competency-based ToT training from international TA. Knowledge retention of trained trainers will be tested 6 months after the completion of ToT courses, with low knowledge retention rates leading to replacement or retraining.

15. Trained trainers will be contracted to deliver competency-based training on a per head basis, with knowledge retention/adoption by trainees to be tested with a statistically significant sample of randomly selected trainees between 6-12 months after receiving training. Training locations and times will be determined in close consultation with trainees (e.g. local administration office, successful farmer premises or university faculties).

16. The ATMP may partner with other development initiatives in particular with LMPD-1 and 2 (Component 3: Diversification and market/value initiatives) working to rebuild or create supply chain infrastructure and provide access to finance for investment. Where possible, the Project will attempt to identify local providers and work with them to develop and supply needed services.

17. The **priority will be given to value chains** with large women and youth participation. A rapid value chain analysis was made during the End Markets Assessment and the design missions⁶⁹ and included dairy (cattle), beef, mutton, skins & hides, and merino wool chains). However, value chain selection might need revisiting during project implementation to accommodate changes in the country-specific political and physical environment, end market, or chain itself.

⁶⁹ Missions fielded in February and March 2016.

18. Consistent with the inclusive market systems framework, selected value chains have the potential to contribute to the development of a sector that is:

- Competitive:** meeting market demand and maintaining or growing market share,
- Inclusive:** providing benefits to economically vulnerable and marginalized groups, and
- Resilient:** able to address, absorb and overcome shocks in the market.

19. The ATMP will support multiple value chains as this will allow to simultaneously meet several development objectives. For example, a mixture of dairy and apiculture may be selected to generate income, improve nutrition, and empower women. At the household level, support to a variety of value chains can encourage diverse livelihoods that spread risk, maximize the sustainable use of land and labour resources, and allow for greater income smoothing.

VALUE CHAIN	RATING 1 to 5		
	Competitiveness	Inclusiveness	Resilience
Dairy	5	5	5
Beef	5	3	5
Mutton	5	3	5
Wool	5	5	3
Leather	4	2	2
Honey & by-products	5	5	5

Source: Mission observations

20. The main selection criteria of the Value Chain Development Business Plan will be the **establishment/enhancement of the productive partnerships** between primary producers and agribusinesses/aggregators. The participants will benefit from the project products on a competitive basis. The other selection criteria will be the **competitiveness potential** and **impact potential**. A format of the VCDBP, selection criteria, evaluation modalities and other implementation procedures will be detailed in the PIM.

21. **Competitiveness Potential.** Significant and sustainable increases in income and employment occur as a result of growth in an industry. As such, the potential for competitiveness - the ability to achieve and maintain a competitive edge over market rivals through an optimal combination of efficiency, product differentiation and access to new or niche markets – will be the most important criterion in value chain selection for the project support.

22. **Impact Potential.** It is important that the selection of value chains leads to the desired impact on the target group, namely, smallholders, women and youth. As 96 percent of raw milk and live animals' suppliers in Kyrgyzstan are small- and medium-scale producers, growth in processing industries will likely generate impact of their income and employment.

23. Assessing potential impact at the agribusiness level is key to understand ways to increase or optimize growth with equity. Another aspect of impact is the multiplier effect of growth in a particular industry. Determining how and where incremental increases in industry revenue are invested in the local economy is an important element of impact.

24. While the ATMP will support all livestock chains in Kyrgyzstan, the **priority should be given** to dairy (cattle and non-cattle), wool (sheep and yak) and bee-keeping as these subsectors in Kyrgyzstan are largely driven by smallholders and rural women.

Component 2. Livestock Value Chains Financing

25. Though the APIU will exercise the day-to-day oversight of the ATMP, it will not interfere with the lending activities of the external partners and Financial Service Providers (FSPs).

26. The APIU will recruit a Rural Finance Coordinator to oversee the activities under Component 2.

27. The APIU should promote social performance ratings of FSPs, the collection and monitoring of relevant financial and outreach indicators, and the development of appropriate management information systems, so that performance information is used as a management tool.

28. The APIU should also promote the participation in the Microfinance Information eXchange (MIX) Market, to promote transparency in the sector. FSPs can also use the MIX Market to compare their performance with that of their peers.

29. The APIU will do the necessary work to prepare MOUs with prospective partners – providers of external credit lines, with which Project beneficiaries will be linked to access credit.

30. The APIU will also work to select FSPs interested in developing new innovative agricultural products and solutions and committed to disseminating lessons learnt as a result of this process.

31. The indicative FSP eligibility criteria can include (but not limited to):

- Have a valid NBKR license and be in full compliance with all banking laws and prudential regulations of the NBKR.
- Have an extensive experience in agricultural lending.
- Be interested and committed to servicing the range of clients who are the intended beneficiaries of the Project.
- Undergo an annual audit that is conducted in accordance with International Standards of Auditing by an audit company acceptable to IFAD.
- Have the necessary staff, knowledge, physical and other resources to implement the product development work under the project.
- Have acceptable asset quality and quality management policies, procedures and skills.
- Have a Board of Directors, responsible for setting the overall bank policy and perform appropriate oversight of the bank's operations.
- Have a qualified and capable management team.
- Have a sound strategic or business plan and appropriate budgeting and budget control procedures.
- Have sound lending policies and procedures, including in respect of the entire credit cycle, problem loan management, write-offs of assets, credit approval authority, etc.
- Have satisfactory internal control and audit procedures, including accounting principles and procedures, and financial documents, internal controls and reporting, and operational controls, confirmed by external auditors.
- Not be exposed to undue interest rate risk, as confirmed by annual audited financial statements.
- Have an internal reporting and management information system capable of providing sufficient information necessary for managing the bank's operations, performance and risks.
- Be willing to share and publicize lessons learnt as a result of the product development (both positive and negative).
- Having prior experience in innovative product development will be a plus.

32. The FSPs meeting the eligibility criteria should be issued a "Request for Proposal" and should submit their product development proposals to the APIU. Together with FSPs, the APIU will develop Terms of Reference (TORs) for external product development consultants as well as budgets necessary to implement the process and disseminate the results. A clear dissemination plan should be part of the TORs for each of the products.

33. To facilitate the FSP selection, APIU will form a Council of experts, which may consist of both local as well as international rural finance specialists. The Council may include experts of IFAD and

FAO to ensure technical competence as well as objective third party assessment of the quality of the proposals.

34. Together with the Council, the APIU will develop a scoring methodology to help guide the selection process. The scoring criteria may include (but are not limited to):
- FSP's compliance with the eligibility criteria;
 - Prior FSP's experience in the development of agricultural financial products and solutions;
 - FSP's openness and willingness to share results as evidenced by prior publications (including online platforms);
 - FSP's willingness to co-fund the proposed product/solution (at least 50% of the requested amount);
 - The proposal's focus on IFAD's target group and project objectives;
 - The innovativeness of the proposal and its potential to generate lessons for the country's agricultural sector.
35. Together with the Council, the APIU will develop the weighing of the criteria to facilitate the assessment of the proposals.
36. All decisions on the FSP selection should be documented in detail and clearly show that all selected FSPs meet the eligibility criteria and satisfy other Project requirements, and include detailed TORs for each of the product prior to the implementation of the product development process.
37. The APIU should establish a threshold budget per one product proposal (e.g. USD 100,000) and limit the number of proposals per one FSP (e.g. up to 2).
38. All of the FSP selection stages and conditions should be part of the PIM.
39. Respective agreements will be signed with FSPs and consultants following the IFAD's procurement procedures.

Component 3. *Upgrading the Kyrgyz Livestock Sanitary System*

40. The APIU will have Memoranda of Understanding with relevant implementing agencies, specifically with the SIVPSS for implementation of Subcomponent 3.1, the KVA and Veterinary Chamber for Subcomponent 3.2, and the KLPRI, the KSRVI and the SSBC for their respective activities under Subcomponent 3.3. A similar approach for implementation arrangements has been established under the ongoing LMDP, whereby the implementing partners undertake their activities under the guidance of and accountable to the APIU, with roles and responsibilities specified in MOUs. TORs for the key consultants to be recruited under the Project are provided in Appendix 4, Annex 1.
41. ARIS will facilitate coordination of animal health and production related activities under Component 3 with PUUs, AHSCs, Village Health Committees, local community-based private veterinarians and processing firms that are proposed under Component 1. This coordination will particularly include dairy and meat hygiene extension activities and managing the grant system for community-based private practice vets. Memoranda of Understanding will be agreed upon between the APIU and ARIS.
42. The Project will be encouraged to pull all the international TA within this Component under one contract with the OIE, as it is the case now under the LMPD. Thus, the Project will be scaling-up the already proven approach to implementation that is successfully applied under the LMPD.

C. Implementation Responsibilities

43. While there will be several institutions engaged in Project implementation, as has been already mentioned, the major implementing parties will be the APIU and ARIS. Each will have its clear areas of responsibility and each will be financially accountable for the implementation of its own activities, with the APIU having overall responsibility for Project oversight and coordination. Memoranda of Understanding (MOUs) will be drawn up between the APIU and ARIS and between the APIU and the

other implementing partners for which the APIU has responsibility. They are: State Inspectorate for Veterinary and Phytosanitary Security (SIVPSS), EBRD's Small Business Support (SBS) and other service providers, Financial Service Providers (FSPs), the Kyrgyz Veterinary Association (KVA), the Veterinary Chamber (VetC), the Kyrgyz Scientific Research Livestock and Pasture Institute (KSRLPI) often called more simply as the Kyrgyz Livestock and Pasture Research Institute (KLPRI), the Kyrgyz and Scientific Research Veterinary Institute (KSRVI) and the State Selection Breeding Centre.

44. **APIU.** The responsibilities of APIU are the following:

- Overall responsibility for Project implementation, coordination, oversight and reporting to IFAD and the government. That includes liaising closely with ARIS, which will operate a relatively independent series of activities, but will nevertheless be accountable to APIU as part of the Project implementation team.
- APIUs *core responsibilities* include: financial management, comprising procurement, disbursement, accounting, auditing and financial reporting; managing the performance of the partner national organizations that are responsible for implementation of specific Project activities (SIVPSS, BAS, FSPs, KVA, VetC, KLPRI, KSRVI, and SSBC); shortlisting, evaluating, contracting and managing the performance of service providers; overall Project monitoring and evaluation (M&E), including baseline and impact surveys, and knowledge management; reporting for all Project activities including assimilating the reports from ARIS and from the other implementation partners; maintaining a results-based system of assessing the performance of the ATMP partner organizations employing trigger and benchmarks; all Project-level documentation and reporting; technical, financial and management backstopping and technical assistance in support of the Project implementation partners; and poverty targeting, gender mainstreaming and the pursuit of other social goals and indicators of Project effectiveness and impact.
- APIU will be *responsible for all national level activities* including the technical and related inputs of the national level institutions to ensure that they are deployed effectively and support the implementation of the range of national level activities and complement and provide the necessary inputs into the Project's community level activities that will be the responsibility of ARIS.
- Regarding the *working relationship with ARIS*, the APIU will facilitate dialogue and coordination with ARIS by organizing regular joint working sessions. These will be well-structured and in-depth sessions most likely every quarter, with more informal working sessions every month, ensuring regular dialogue on all aspects of Project implementation, including but not exclusively those focused on the PUUs, farmers groups and the communities, so that ARIS is fully informed of the other, non-community level activities that must be harmonized with those initiatives at the community level.
- In terms of the *implementation of Project Components and Subcomponents*, the APIU would have the following responsibilities, as clearly indicated in the detailed cost tables:
 - Most of Subcomponent 1.1 (excluding those aspects that will be implemented within the PUUs and smallholders' groups), i.e. capacity building of selected value chains' stakeholders, specifically training, study tours and advisory services through BAS and other contracted service providers
 - All of Subcomponent 1.3 through a contracted service provider
 - All of Component 2 through FSPs
 - Most of Component 3 (excluding those aspects that will be implemented within the PUUs/AHSCs, VHCs and smallholders' groups), i.e. strengthening various institutions with their respective assistance, specifically through the SIVPSS, KVA, VetC, KLPRI, KSRVI, and SSBC.

45. **ARIS.** The responsibilities of ARIS are the following:

- Overall responsibility for all Project *implementation at the community level*, focused on PUUs and smallholders' groups including the administration of all Project grant funds, i.e.:
 - Facilitate the dialogue between the farmers and their groups and the agribusinesses applying for the role of a LE. During the plenary meeting the role of ARIS is critical to ensure that the responsibilities of farmers in their new role of formal suppliers of a given agribusiness
 - Design, in close collaboration with SBS and a legal expert, and conduct training on "Doing Business Together: options, benefits and responsibilities"
 - Mentor farmers and their groups in adapting product specifications of the buyers
 - Catalyze farmers' cooperation by providing evidence of economic benefits of joint product bulking and marketing (relying on international experience)
 - Aligning LMPD activities to enhance the effect of the productive partnership (e.g. focus on blanket vaccination and pasture productivity to reduce the production costs)
 - ARIS shall have no particular role in elaboration of the VCDBPs but takes part in the Selection Panel;
- Coordination and accountability for effective performance of the combination of its own ARIS staff and technical inputs from the government's technical agencies (for example SIVPSS), public organizations (like KVA and Vet Chamber) and Project's contracted service providers in the implementation of the community-focused activities for which ARIS is responsible.
- *Monitoring and evaluation* of its own activities, including monitoring of the related performance indicators, assembly and dissemination of information for *knowledge management*, and the related reporting both to its own management and in a synthesized form to the APIU to ensure that the APIU is fully informed and can provide timely and appropriate guidance to ARIS.
- *Financial management* of all those activities for which ARIS is responsible, comprising procurement, disbursement, accounting, auditing and financial reporting.
- In terms of the *implementation of Project Components and Subcomponents*, ARIS would be responsible for:
 - Some elements of Subcomponent 1.1 related to mobilization and mentoring of PUUs and smallholders' groups
 - All of Subcomponent 2.1 that deals with administration of grants
 - Some elements of Component 3 related to mobilization of AHSCs and private vets.

D. Project Organization

46. The MoAM will be the implementing agency for the Project. The organizational arrangements for the Project, as can be seen from the chart below, focus on APIU and ARIS being the two main institutions charged with responsibility for coordinating and implementing the Project. As can be seen, the APIU would have responsibility for coordinating activities of a number of institutions, each of which has its own area of responsibility for Project implementation (as presented in the previous section). While the APIU would work with the national offices of each of these institutions, a number of them have offices at Oblast and rayon levels, for example the SIVPSS and KVA.

47. ARIS has representation at two levels, each of which will be involved in the implementation of the Project: ARIS headquarters and ARIS CDSOs at the PC/PUU level in the clusters where the selected value chains are located. It will also work with technical support from various service providers.

48. **Project Oversight.** There are a number of bodies that already exist that will be used to help provide guidance and support for the Project. They include the MoAM Steering Committee and the ARIS Steering Committee. The Project would use both of these and, as and when necessary, when the matters concerning the ATMP would be placed on the agenda of these two bodies for discussion and advice. In addition to these two bodies, a Project-specific oversight body would be formed under

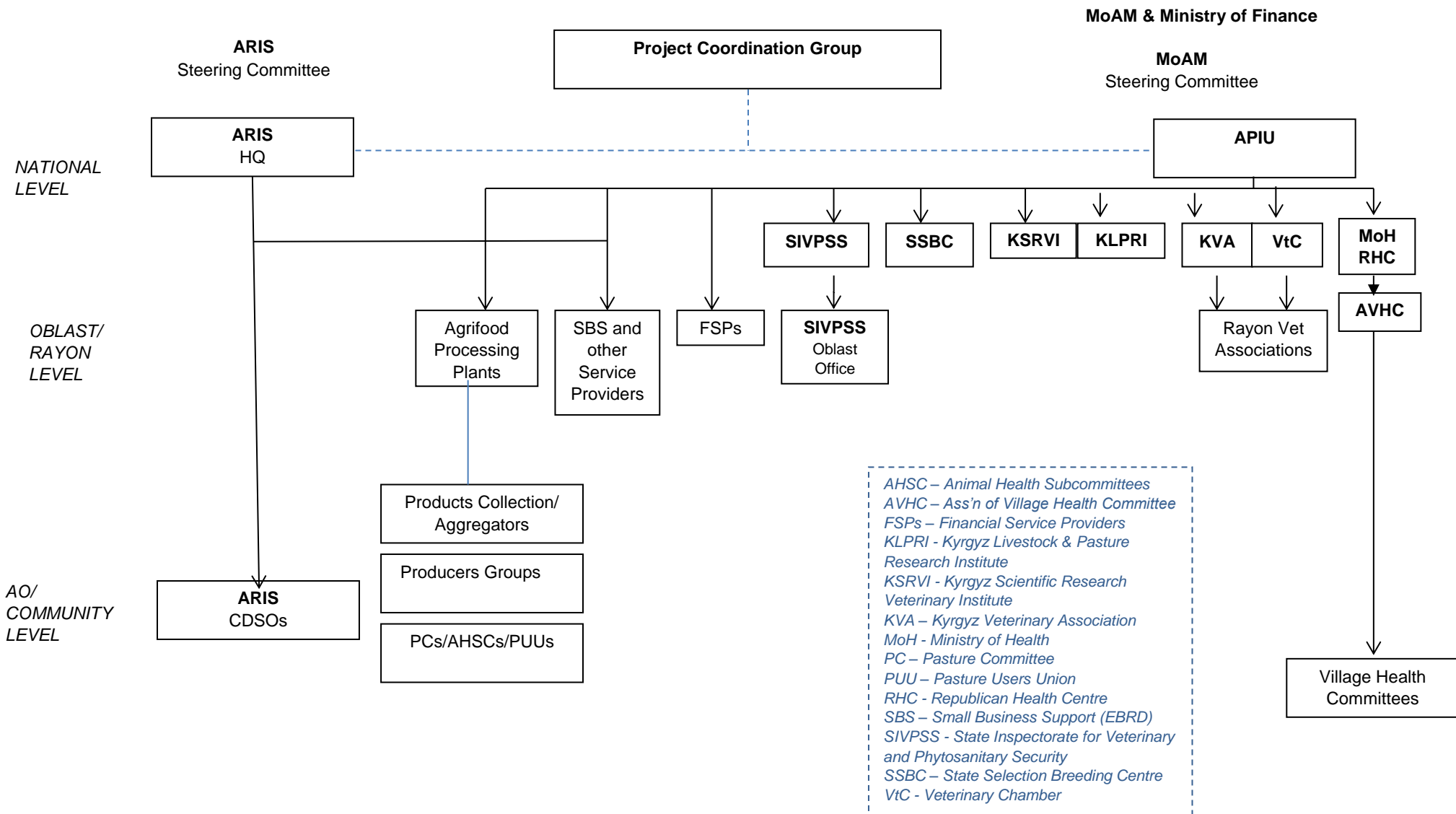
the ATMP to provide guidance for Project management. It is referred to as the Project Coordination Group (PCG). It includes representation from each of the implementing agencies, representation from the PC level and private sector. The body will have a balance between government and civil society members. It meets semi-annually and on an ad hoc basis as required.

49. The PCG is an advisory, not an executive body. It would review progress of the Project against targets and its success in meeting the performance indicators. It would also review the progress against the annual work programme. It would be also a sounding board for discussing issues that arise during implementation and for which it can provide insight and advice to Project management. It would also provide the opportunity for Project management to receive feedback on new ideas or approaches that it is considering to introduce under the Project. It will feed its findings and proposals into the Platform for PPPP. As and when required, the Group could form smaller working groups to tackle specific issues on which the Project needs advice. These would be temporary bodies with a specific purpose and outputs, which once they have provided the inputs required would be disbanded.

50. **Project Start-up Activities.** These activities will include: (i) finalization of Terms of Reference for key institutions and their staff including the APIU, ARIS, the other implementing partners and required Technical Assistance; (ii) recruitment, as necessary, of key staff and TA financed by IFAD; (iii) updating the Memoranda of Understanding between the key implementing partners; (iv) conducting a gender sensitive, livelihoods-oriented baseline survey for the entire ATMP led by the APIU M&E Manager supported by national TA, plus making arrangements for subsequent repeater surveys, and Participatory Impact Monitoring with particular attention on targeting, gender and socio-economic improvement issues; (v) development of an annual work plan and budget (AWPB) for the Project's first-year activities; (vi) finalization of a procurement plan for the first 18 months of Project implementation; (vii) an initial deposit in the Project's designated accounts by IFAD of up to US\$2 million; (ix) setting up the Project M&E system; (x) preparation of the Project Implementation Manual (PIM); and (xi) holding the Project Start-up Workshop.

51. If possible, all analyses would be carried out in time for their findings to be fed into the content of the Project Start-up Workshop. Among those invited to attend would be staff of the APIU and ARIS and representatives of other key potential stakeholders and participants in the ATMP including among others: representatives of the project's primary target group, i.e. women and men smallholder livestock producers; PUUs; veterinarians; livestock processors and traders; potential services providers; relevant farmers organizations; relevant government representatives; socio-economic profilers (e.g. the State Committee of the Kyrgyz Republic on Statistics); local government and community-based organizations reflecting the project's intended target groups, in particular rural women's organizations; representatives of other projects concerned with rural poverty reduction and development; and representatives of other relevant development assistance donors, e.g. the World Bank, the United Nations Development Program (UNDP), the Asian Development Bank (ADB), German bilateral assistance (GIZ), Swiss Development Corporation (SDC), USAID, etc. Key outputs from the workshop would include guidance on: (i) Project component content and implementing modalities; (ii) refinement/adjustments to the Project Implementation Manual (PIM); (iii) refinement to the Project's targeting criteria and M&E indicators; (iv) agreement with an Annual Work Plan and Budget (AWPB) for the ATMP's first-year activities; and (v) finalization of an 18-month procurement plan. Outputs related to implementing modalities and associated results and impact would feed into the design of the Project's Management Information System (MIS) and M&E system.

PROJECT ORGANIZATION STRUCTURE



Appendix 6: Planning, M&E and learning and knowledge management

A. Planning

1. Planning of the AWPB will involve the APIU and ARIS. The APIU will prepare the budget for Component 1, 2 and 3 except for those activities to be implemented by ARIS. ARIS will prepare its respective budget under the Subcomponents 1.2 and 1.3 of Component 1 and provide it to the APIU for consolidation.
2. The APIU will send the AWPB to IFAD 60 days prior to the end of each Project Year for no objection. ARIS shall provide its final inputs as approved by their respective governing bodies to the APIU 21 days before such date.
3. The APIU will consolidate the Project's quantitative financial and physical output data in the 1C, which is accounting software with the features of Management Information System. The 1C organises inserted Project planned and actual data by financing source, category of expenditure, gender, status and timing of all activities on (i) financial expenditure; (ii) physical outputs and outreach; (iii) procurement and contracts; and (iv) indicators for the Results and Impact Management System (RIMS).
4. The APIU's M&E unit will be responsible for overseeing the inserting of data into the 1C on financial management, procurement and M&E respectively, and ensuring the correctness of such data. A Coordinator in the M&E unit will have the main responsibility for the quality and comprehensiveness of the data inserted in the 1C and ensuring that the 1C reporting tables are appropriately used for the AWPB.

B. Monitoring and Evaluation

5. The M&E system will have a three-level structure, consisting of output monitoring, outcome monitoring and impact evaluation. A list of areas to be monitored is included in Appendix 6, Annex 1 (Extended Logframe). The final indicators will be defined in the start-up workshop using the Logframe and this Appendix as point of departure. This will include relevant first second and third level indicators of IFAD's Results and Impact Management System (RIMS). AWPBs will provide the targets for first level monitoring. The APIU M&E staff will have lead responsibility for the coordination of all M&E activities of the project.
6. **Output monitoring** will comprise the monitoring of physical and financial inputs, activities and outputs, both planned and actual. The APIU and its M&E staff will be responsible for consolidation of all output data, which will flow from records at different management levels (ARIS, SIVPSS, KVA, Vet Chamber, SSBC, FSPs, LEs, PUUs, Farmer groups etc.). Such entities would keep clear records for the cost of all activities and their timing. The basic output data indicators to be monitored by the APIU and the Project Parties on the output level are outlined in Appendix 6, Annex 1.
7. The APIU will consolidate the key quantitative financial and physical output data in the 1C. The 1C will generate reports on the planned and actual financial and physical performance of the Project, including the first level RIMS report. This will also comprise the monitoring of the management costs of ARIS.
8. **Outcome monitoring** will assess the use of outputs and measure their benefits at beneficiary level. The monitoring will focus on the accessibility of Project outputs and the extent to which they provide benefits to the target groups in terms of access to finance, services, and markets. It will also include the Project's achievements in terms of returns, added value, direct and indirect job creation, and prospects for sustainability.
9. The Project will conduct periodical standardized **Field Surveys** with Project beneficiaries. The questionnaires for the Field Surveys would be drafted by the M&E staff of the Project with technical

support as applicable, and be standardized for each type of Project activity. The Project may make use of an information collection platform such as iformbuilder⁷⁰ or similar, for conducting the survey and maintaining the database.

10. The objective of the Field Surveys on the outcome level would be to: (i) provide management with information on quality and usefulness of Project activities for planning and taking corrective action to remedy emerging issues; and (ii) collect qualitative data on Project activities to identify success stories and models for replication.

11. To capture qualitative aspects and to sharpen the analysis, ARIS' M&E staff will complement the Field Surveys by conducting interviews with focus groups.

12. **Impact evaluation.** The main instruments for the impact evaluation are the Project's Baseline Survey, Mid Term Survey, and Project Completion Report. The Baseline Survey shall be conducted in the first Project year, procured by the APIU. The objective of the baseline survey will be to establish benchmarks for time-series comparisons between Project beneficiaries and non-beneficiary 'control' populations. The Mid Term Survey (MTS) shall be completed one month prior to the IFAD Mid Term Review, and its objective is to provide ATMP management and the MTR team evidence for possible revisions the ATMP design and targets. The Project Completion Report shall be conducted in the six months preceding Project closing.

13. The Field Surveys would be used to collect relevant quantitative data for the MTS and Completion Report. Such quantitative data would cover incomes and assets and increase in employment in the various value chains, thus providing the Project with a dataset for quantitative impact evaluation. This would, through extrapolation from relevant beneficiary strata, allow evaluation of impact for all relevant value chains on at least the following levels: (i) incremental increase in farmer income and assets measured by IRR and NPV; (ii) employment creation; (iii) incremental increase in regional economic activity; and (iv) incremental increase in tax revenue to the government. A more detailed outline is provided in the Appendix 6, Annex 1. The data collected in the course of the Field Surveys can be complemented in the last Project year by additional **Thematic Studies** to be procured by the APIU necessary to measure the full impact of the Project's interventions.

C. Learning and Knowledge Management

14. The learning and knowledge management activities will include (i) impact studies comprising a Baseline Survey, MTS and Completion Report; (ii) Thematic Studies; (iii) information dissemination campaigns about the project; (iv) preparation of publications and video materials; and (v) training of processors and other actors in the value chain, farmers, women's groups and youth groups in modern farm techniques and farm management; vi) financial intelligence training; vii) Progress Reports.

15. During the final year of Project implementation, as part of the preparation of the IFAD-required **Project Completion Report/Impact Assessment (PCR)**, the M&E data collected over the Project implementation period will be used as part of a thorough assessment of Project achievements. In particular, this shall compare changes in the livelihoods of beneficiaries that relate to the implemented Project activities against the situation documented in the **Baseline Study**. The Project Completion Report shall share lessons learned and development experience.

16. The Project will also finance **Thematic Studies** that will feed into the Project completion process. Such studies will, making use of the data collected in the course of the monitoring activities of the M&E staff as well as through complementing surveys, document the impact of Project interventions and will provide insights into the achieved targeting, and the efficiency and efficacy of such investments.

17. The Project would prepare **publications and video materials** to complement trainings and for enhanced and more widespread learning. These would comprise practical 'user's manuals' for the intensification of the agricultural production on best husbandry practices, inputs, prices, expected yields etc. on the identified activity types. Films that document the establishment of Project

⁷⁰ See www.iformbuilder.com.

demonstrations and co-financed investments should complement these publications. A thorough due diligence would be done to identify whether existing materials can be used for this purpose, and whether permission can be obtained for further dissemination. The publications and video materials would be made available both in 'hard' and electronic formats among project stakeholders. The APIU M&E staff would set up and maintain a GIS in which data is inputted to illustrate Project interventions. The APIU would maintain a Project webpage to provide information to beneficiaries and other stakeholders about the Project's benefits and modalities for participation, and for dissemination of the knowledge products produced by the Project.

18. **Progress Reports** have two primary objectives: (a) to record the progress of implementation, for the period under review, compared against the targets and objectives set out in the loan documents and the AWPB; and (b) to confirm the degree to which the Borrower is in compliance with the conditions of the financing agreement.

Annex 1: Extended Project Logical Framework

Please refer to the Project File

Appendix 7: Financial management and disbursement arrangements

Financial Management Risk Assessment

Inherent Risks: Country Issues, Entity Risks and Project Design

1. A financial management capacity and risk assessment for this project has been completed in accordance with CFS guidelines. CFS visited two institutions proposed for implementation, namely the APIU and ARIS. In addition visits were carried to some of the commercial banks, which were proposed as Financial Service Providers (FSPs) and Credit Line Management Unit (CLMU) under the Ministry of Finance (MOF) entrusted to manage Credit Lines funded by international financiers.
2. The inherent financial management risk and country risk is rated as **High**. Kyrgyzstan has a TI Corruption Perception Index Score of 28 in 2015 - current ranking 123th out of 167 countries. In 2014 it ranked 136st out of 175 countries with a score of 27. PEFA updated in 2014 (last one in 2009) shows considerable improvements in the Public Financial Management (PFM). In the 2016 IFC/WB's Ease of Doing Business Report, Kyrgyzstan is ranked 67th out of 189 countries. The CPIA ratings in public sector management and institutions cluster average (1=low to 6=high), which measures public sector management and institutions cluster including property rights and rule-based governance; quality of budgetary and financial management; efficiency of revenue mobilization; quality of public administration; and transparency, accountability, and corruption in the public sector; rated Kyrgyzstan at 3.2 for 2014, marginally higher than the 3.1 rating for 2013.
3. The most recent PFM assessment in 2014 showed considerable improvement in several areas of weaknesses found earlier: 14 Performance Indicators scored as A or B, as compared with 6 in 2009, i.e. the number of Indicators with a D score has fallen from 14 to 6. Noteworthy improvements which have been made are the systems and laws that have been put in place, such as an automated "Treasury-Budget Information System" which prevents the execution of any payment which is not provided for in the budget; and Tax Law and the State Tax Service (database has been unified throughout the country, with links to social security and business registration databases). Considerable efforts have been made since 2009 to improve transparency. Budget execution and debt reports are now published monthly on the MOF website, while all tenders and contract awards are published online. External Scrutiny and Audit indicators also improved in terms of improving the scope and nature of external audit by the Chamber of Accounts (CoA), which has been critical of the arrangements for managing publicly-owned assets.
4. Despite the improvements made, some areas remain weak and require further strengthening such as the Internal financial controls, controls over payroll and failure of the World Bank project to support the implementation of a fully automated Treasury Management Information System (TMIS) as well as a Human Resources Management Information System.
5. The current two on-going IFAD's funded projects are implemented by the same proposed implementation units for this Project - the APIU and ARIS. The financial management performance of both agencies is rated satisfactory, and no material weakness identified in the internal controls systems in the external audit reports of the previous years. Both agencies are staffed by personnel who are reasonably experienced on IFAD's FM and disbursement guidelines and similarly on the WB's procedures. The Disbursement Officer of the APIU took over the position of Finance Manager following the resignation of the previous post holder, and the recruitment of replacement of the Disbursement Officer is to be concluded. In order to ensure sufficient level of segregation of duties and more balanced workload, the recruitment of an additional Disbursement Officer for the APIU and the vacant Disbursement Officer position (budgeted under LM DP – ARIS) are to be hired/filled.

6. Challenges for the financial management of this Project lie in the coordination between the multiple agencies involved e.g. the APIU, ARIS, implementing partners and the parallel financiers - FSPs, which are being utilised for implementation of the different components.

7. There are no internal audit units in all line ministries and the profession is still under development to meet the International standards for internal audit. The APIU does not fall under the scope and mandate of the ministry Internal Audit Department.

8. The CoA as Supreme Audit Institution (SAI) currently does not audit internationally financed projects but it does audit those projects as part of the audit programme of the ministries accounts.

9. To determine the Project specific control risks a Financial Management (FM) risk assessment of the ATMP and its fiduciary arrangements has been completed; this includes a detailed FM assessment of the APIU and ARIS. In conclusion, inherent risks and control risks for the Project are rated as high and medium respectively. Appropriate risk mitigating actions have been developed as detailed below. The residual overall financial management risk is rated **Medium**, after the implementation of appropriate risk mitigation measures to ensure accountability of funds.

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
A. Inherent Risks			
TI Current 2015 ranking 123 th out of 167 countries and score 2.8	H		N/A
Country Level: While significant improvements have been noted in the Public Financial Management (PFM) systems, some areas of PFM remain weak and require improvement e.g. Internal financial controls, controls over payroll and failure implementation of a fully automated Treasury Management Information System (TMIS)	H	The APIU and ARIS to maintain independent financial management system, hire an internal audit for activities implemented by the APIU and its implementing partners and use of private auditors.	M
Entity and Project design: Project spreads all over the country	H		N/A
B. Project Control Risks			
1. Organization & Staffing a) Adequate staff, with prior knowledge of donor procedures exists within the proposed implementing agencies of the APIU and ARIS. However, it is to be noted that APIU Disbursement Officer of the ongoing IFAD's funded projects of LDMP I and II has recently been appointed as Financial Manager and the position of Disbursement Officer is vacant at the time of the mission. b) Turnover in senior financial positions	M	a) Recruitment of the Disbursement Officer position at the APIU for LMDP. b) Recruitment for an additional Disbursement Officer at the APIU for ATMP and ensure adequate FM capacity at the implementing partners. c) Recruitment of the Disbursement Officer for ARIS, which is budgeted under LMDP. d) Sufficient training on IFAD procedures to be given to new and existing financial staff (including the financial staff of implementation partners) to ensure that roles and responsibilities are interchangeable within each agency.	L

<p>2. Budgeting</p> <p>a) Timely submission and coordination with the different implementing agencies/partners will be challenging.</p> <p>b) Under spending, absorbing capacities and unrealistic budgets.</p>	<p>H</p>	<p>a) Budget preparation and coordination will remain with the APIU. Workshop will be arranged on annual basis to discuss plans and allow timely preparation of AWPB and consolidation for the APIU, ARIS and implementing partners.</p> <p>b) To ensure that timely inputs are received, the APIU Director will initiate the process 4 months before the budgets are due.</p> <p>c) To ensure a realistic budget, deliverables on previous budgets will be reviewed by the technical and financial teams. Significant variances will be investigated regularly and corrective actions and will be documented.</p> <p>d) Budgets are to include all sources of financing separately and are to show estimates by quarter.</p> <p>e) Interim financial reports showing progress against budgets are to be submitted to IFAD semi-annually.</p>	<p>M</p>
<p>3. Funds Flow & Disbursements</p> <p>a) IFAD and GoK funds flow through Designated banks Accounts as identified by MOF for the APIU and ARIS separately and monitored by the respective Financial Manager.</p> <p>b) Disbursement bottlenecks could arise due to weak cash flow planning, multiple disbursement points and delays of counterpart funds, though the APIU and ARIS have extensive experience in IFAD disbursement procedures.</p>	<p>M</p>	<p>a) Clearly detailed fund flow arrangements and continuous follow-up of such arrangement within the first year of implementation to ensure any course corrections will be made to mitigate risk of liquidity problems.</p> <p>b) Cash flow to implementing partners should take place against detailed and realistic plans</p> <p>c) Expenditures incurred by implementing partners should be recognised when actually incurred. This mechanism will be defined within the project implementation manual.</p>	<p>M</p>
<p>4. Internal Control</p> <p>a) Remoteness of locations of expenditures will weaken control.</p> <p>b) Sufficient segregations of duties exist and there are appropriate mechanisms in place for safeguarding of assets however this will be changed as a result of the new recruits and activities of the new Project.</p> <p>c) A financial management manual exists for on-going projects and will need to be updated to include the new project.</p>	<p>M</p>	<p>a) A mid-implementation financial and performance audit will be required to ensure funds have been utilized efficiently and effectively and for the purposes intended.</p> <p>b) Internal control procedures will be documented within an updated project implementation manual.</p> <p>c) Guidelines for eligibility of investment proposals and payments will be included in the financial management manual.</p>	<p>L</p>
<p>5. Accounting Systems, Policies & Procedures</p> <p>a) The accounting system of 1 C was designed for both agencies to implement donor funded projects.</p> <p>b) Accounting is on cash basis.</p>	<p>M</p>	<p>a) Financial manual will be enhanced to ensure that policies and procedures are up to international standards and will be a condition for first disbursement.</p>	<p>L</p>

<p>c) Adequate procedures are in place for accounting.</p> <p>d) Advances to implementing partners are recorded as expenditures when issued and actual expenditures to avoid gain/losses on the exchange rate valuation.</p>		<p>b) All finance staff will be required to take and pass IFAD's e-learning on financial management.</p> <p>c) The transfers to implementation partner are to be recorded as advances by the APIU and eligible expenditures are to be recognised only when actual incurred and justified. The accountings system should be configured to apply the historical exchange rate to avoid the gain/losses on exchange rate.</p>	
<p>6. Reporting & Monitoring</p> <p>a) Periodic financial progress reports and interim financial reports are available and can be produced by the system. These have been timely and accurate.</p> <p>b) The coordination to obtain and include the financial reports of the parallel financing of the project that is managed by different agencies to show the overall financial reports of the project might of challenge.</p> <p>c) Measuring and reporting the in-kind contributions of beneficiaries.</p>	M	<p>a) No additional measure to be taken</p> <p>b) MOU to be signed between the APIU and the administrator/donor of the parallel financing to include a clause on the submission of periodic financial report to facilitate reporting of the overall Project's activities.</p> <p>c) The PIM will detail how beneficiaries in kind contribution will be measured and the valuation basis. The Project to capture and report beneficiaries' contributions timely and disclose them appropriately.</p>	M
<p>7. Internal Audit</p> <p>a) While internal audit (IA) exists in MoAM, the Internal audit profession is in Kyrgyzstan is still developing. In addition, IA department of MoAM does not audit the APIU.</p> <p>b) ARIS has an Internal Audit Department and staffed by reasonably qualified personnel.</p>	M	<p>a) To strengthen the assurances of the end-use of IFAD's resources an independent internal auditor, and a performance audit for components/activities implemented by the APIU and Implementing partners will be hired at mid-term.</p> <p>b) ARIS internal audit to include the ATMP in their annual-work programme.</p>	L
<p>8. Auditing</p> <p>a) CoA, the country's Supreme Audit Institution, performs external audits of MoAM but not systematically. The internationally funded projects have not typically used the SAI.</p>	M	<p>a) Independent private auditors will be hired for the project audit, with the TORs for the auditor to be cleared by IFAD.</p>	L
<p>Project Fiduciary Risk at design:</p>	MEDIUM		MEDIUM
<p>OVERALL FM RISK</p>	MEDIUM		

* H=High, M=Medium, L=Low

Proposed Financial Management and Disbursement Arrangements

Financial Management Organization and staffing

10. The APIU, which is an autonomous entity under the MoAM and has been legally established in 1996 for managing donor funded projects; and ARIS, which is an independent agency registered at the Ministry of Justice since 2004 will be the agencies responsible for the management of the Project. A subsidiary agreement is to be signed between MOF and ARIS for the planned activities to be implemented by ARIS under this Project, which is a disbursement condition for ARIS. Both agencies have long experience of managing donor funded projects, i.e. IFAD, WB, KFW, EU. Currently the two on-going IFAD funded projects, namely LMDP (I and II), are managed by the same agencies. The

financial department of the APIU consists of four positions; Finance Manager, two Disbursement Officers (one for WB project and the other for the on-going LMDP), and an Administrator. The Disbursement Officer position of LDMP is currently vacant and is expected to be filled by September 2016. An additional Disbursement Officer will be hired to help on the financial management of the ATMP at the APIU within three months from project effectiveness. While for ARIS the current financial management department consists of 6 positions: Finance Manager, four Disbursement Officers (each is assigned with specific projects), and Finance Assistant. The Disbursement Officer budgeted under LMDP I has not been recruited as the current capacity deemed adequate, however and due to the need to increase the current capacity to manage the new Project, this position will be filled within three months from Project effectiveness. Each of the implementing partners pre-identified in the Project design will have an accountant to handle the financial management of the funds that will be transferred to them by the APIU. Procurement at both agencies will be handled by the procurement staff. New staff will be trained by existing PMU staff on IFAD financial management and procurement procedures.

11. The job descriptions are available in the current PIMs and FM staff are all contracted on fixed contracts of one year renewable. The contracts renewal is subject to satisfactory performance, funding availability and the need for the positions.

Accounting systems, policies and procedures

12. Each of the agencies is currently using 1C software for project accounting housed in the their servers. This is also being widely used by other donor projects in the country (WB, ADB). A walk through of the system indicates that it is a very good software, with bilingual reporting (English and Russian), good controls on financial accounting and reporting. The system generates withdrawal applications, interim financial reports, financial statements, Smart Statement of Expenditures (SSoEs), reconciliations of the Designated accounts. This software will be utilised for this Project, after being configured to allow set up for the new Project. The Project will adopt accounting procedures and policies consistent with the international accounting standards (cash basis).

13. The Project will account for the cash contributions by the targeted recipients based on the supporting documents of bank statements showing such contributions have been deposited. While for the in-kind contributions the Project will record them based on the estimated valuation by the technical people and subsequently disclose them as an annex to the financial statements.

14. The transfers from the APIU to the Implementing Partners will be recorded as an advances and expenditures will be recognised once actually incurred. The accounting system should be configured to apply historical exchange rates for advances to avoid exchange rate gains and losses.

15. All accounting policies and procedures, related to the Project will be clearly documented in the PIM.

Financial reporting

16. Financial Reports are available from the 1C system for the ongoing projects and are compliant with IFAD reporting requirements and can be customized to a great degree, including budget versus actuals, budget and actuals per component, sub-component and categories for each source of financing. The same reports will be required for this Project and for which 1C accounting software will be configured to enable generating the same reports. Interim Financial Reports (IFRs) can be generated easily from the systems and will be required to be sent to IFAD for monitoring purposes every six months. Financial reports will include amounts contributed by beneficiaries.

17. ARIS will quarterly submit financial reports to the APIU for consolidation.

18. The APIU will coordinate with the identified implementing agencies proposed for Sub-Component 2.1 (Access to External Credit Lines), which is anticipated to be parallel financing by i.e. FSPs to get their financial reports indicating the amount disbursed from their resources to end beneficiaries, and the correspondent cash or in kind contributions made by targeted beneficiaries under this sub-component and will include them as part of their financial reports.

19. The APIU will consolidate the financial reports for the entire Project including those of ARIS and implementing agencies proposed for Sub-Component 2.1.

Internal controls

20. In each of the agencies, the Financial Management function is headed by the Finance Manager and Disbursement Officers reporting to the Finance Manager. Budgeting is managed by the Technical Implementation Unit with input - as required - from the Finance and Procurement Units. Sufficient controls and segregation of duties exist in the current system and are documented in the manual. Joint signatories are required for the authorisation of any expenditures and payments. Majority of payments will be paid through bank transfers and few payments are expected to be exceptionally paid in cash. ARIS has long experience in managing community grants for sub-projects and related procedures are documented in the current manual (PIM). This financial manual will however, be updated/ revised to reflect the functioning environment and specificities of the new Project activities and will be shared with all staff working on the Project prior to the first disbursement.

21. Fiduciary oversight of sub-projects carries an inherent risk because controls can be weakened by decentralized locations of sub-projects. This risk will be partially mitigated by internal and external audits with terms of reference to be extended to include end use of funds.

Budgeting

22. Current staff of the APIU and ARIS have experience in preparing Annual Work Plan and Budget (AWPB) in accordance with IFAD requirements. Disbursements of Grants will be based on the selected investment proposals. Since it would not be feasible to include these sub-projects in the AWPB, robust operational guidance will be developed specifying targeted sub-sectoral allocations and targeted beneficiaries.

23. Each of the agencies and the implementing partners will prepare their individual budget four months prior to beginning of each Project year on a bottom up approach. Annual workshop will be held between the APIU and ARIS and implementing partners to facilitate finalisation of AWPB including procurement plan. The APIU will review, consolidate and submit AWPB to the MOF for approval and to include it in the country budget. Subsequently, the budget will be approved by Project Coordination Group and sent to IFAD for no objection. Budgeted amounts are based on theoretically best estimates. With respect to receipt of counterpart funds, these are budgeted on an annual basis and released by the MOF quarterly or on need basis of PMUs.

24. The approved budget will be incorporated in the budgetary modules of the APIU/ARIS Accounting Systems to facilitate tracking of actual against budgeted expenditures by financing category, component and sub-component. To facilitate course correction for variance from budget, a quarterly project management meeting will be conducted between the APIU and ARIS and implementing partners to review the financial performance and to determine if any amendments are required.

Disbursement Arrangements and Flow of Funds

25. The Project will use available disbursement methods of replenishment and direct payments. It is expected that most expenditures will be through the Designated Accounts using the imprest mechanism. The ceiling of the authorized allocation will be of no more than six months of projected Project expenditures by each agency.

26. Four US\$ denominated Designated Accounts will be opened for the Project by the Recipient at a commercial bank identified by the MOF and acceptable to IFAD to receive the Loan and Grant proceeds - two Designated accounts for the APIU (One for the Loan and another for the Grant) and two for ARIS. Equally, four Operating accounts in local currency will be opened by the Recipient to receive transfers from the corresponding Designated accounts.

27. The Project will be allowed to use Direct Payment only for expenditures that are in excess of 30% of the advance to the Designated Accounts.

28. Replenishment Applications will be prepared by the each agency based on certified Statements of Expenditure (SoEs) for all expenditures except XXX (To be further elaborated during the PIM preparation). Applications for replenishment will be submitted to IFAD, at a minimum every quarter or when 30% of the designated account has been utilized for eligible expenditures, whichever occurs earlier. Details regarding the Designated Accounts allocations and SoE thresholds will be found in the Letter to the Recipient.

29. Two accounts in local currency – one for each PMU will be open at bank identified by the MOF to receive the counterpart funding. The counterpart funding will flow into the bank accounts quarterly or on need basis.

30. Beneficiaries contribution are expected in be in cash and in-kind. The cash contribution for the related eligible investment activities will be deposited into a separate bank account before payment can be made to supplier/service providers. The bank advice of the deposit will be submitted along with other supporting documents for Project contribution payment process.

31. The Funds Flow arrangement to meet eligible project expenditures are set out in a Chart in Appendix A7.1 below.

Internal Audit

32. While the MoAM does have an internal audit (IA) department, the APIU is not audited by the department as it does not fall under its mandate. The capacity for IA is still developing within the country. Therefore and to strengthen the assurances of the end-use of IFAD's resources an independent internal audit, and a performance audit for components/activities implemented by the APIU and Implementing Partners is being recommended at mid-term. With regard to ARIS, IA is established and staffed by reasonably qualified staff and will audit this Project as part of their annual work programme

External Audit

33. The APIU shall appoint an independent auditor to audit the accounts of the entire Project on annual basis, following the international auditing standards. The Terms of Reference for the audit will be cleared by IFAD on an annual basis. The performance of the auditor shall be reviewed every year to confirm whether the auditor will be reappointed. An auditor once appointed could serve for a maximum of three (3) years after which another auditor might be appointed. An annual audited financial statement together with a management letter on audit observations of internal controls, will be submitted to IFAD no later than 6 months after the end of the fiscal year.

Anticorruption ad Good Governance Framework

34. The primary responsibility of detecting fraud and corruption lies with the borrower. However, the Project should note that IFAD applies a Zero Tolerance Policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. "Zero Tolerance" means that IFAD will pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. IFAD shall take all possible actions to protect from reprisals individuals who help reveal corrupt practices in its project or grant activities and individuals or entities subject to unfair or malicious allegations. Given IFAD's Zero Tolerance described above, it is important that the staff and all stakeholders of the Project are familiar with IFAD's as well as national anticorruption policies and whistle blowing procedures. The IFAD anticorruption policy is available on the IFAD website at www.ifad.org/governance/anticorruption/index.htm). The IFAD website also provides instructions on how to report any alleged wrongdoing to the Office of Audit and Oversight (<http://www.ifad.org/governance/anticorruption/how.htm>).

Supervision and implementation support plan (FM)

35. In light of the risk assessment, in the first two years of implementation the supervision plan of the Project will especially focus on the following actions:

- At least two on-site visits that will involve inter alia visits to beneficiaries selected for grants on eligible investment plan, public goods and the activities those are carried out by Implementing Partners and updating the FM assessments.
- Detailed review of adequacy of the staffing arrangements at the APIU, ARIS and Implementing Partners.
- Detailed review of the Financial Management Arrangements in the PIM including, relevant policies, guidelines and criteria with regards to eligibility criteria of the investment plans for Grants and controls over the end use of these Grants.

- Detailed review of the financial reports produced by system and the effectiveness of budgetary controls by the APIU including the implementing partners and ARIS.
- Detailed review of the fixed asset register.
- Detailed review of records management, back up and the use of the Statement of Expenditure (SOE) procedure and the applicable SOE-thresholds (adequacy of supporting documentation) by the APIU, ARIS and Implementing Partners.
- Follow-up on work performed by the Internal audit department of ARIS.

36. The supervision process will be complemented by desk review of progress and consolidated financial reports, the Project's annual financial statements, internal audit reports, and annual audits.

Taxation and Custom duties

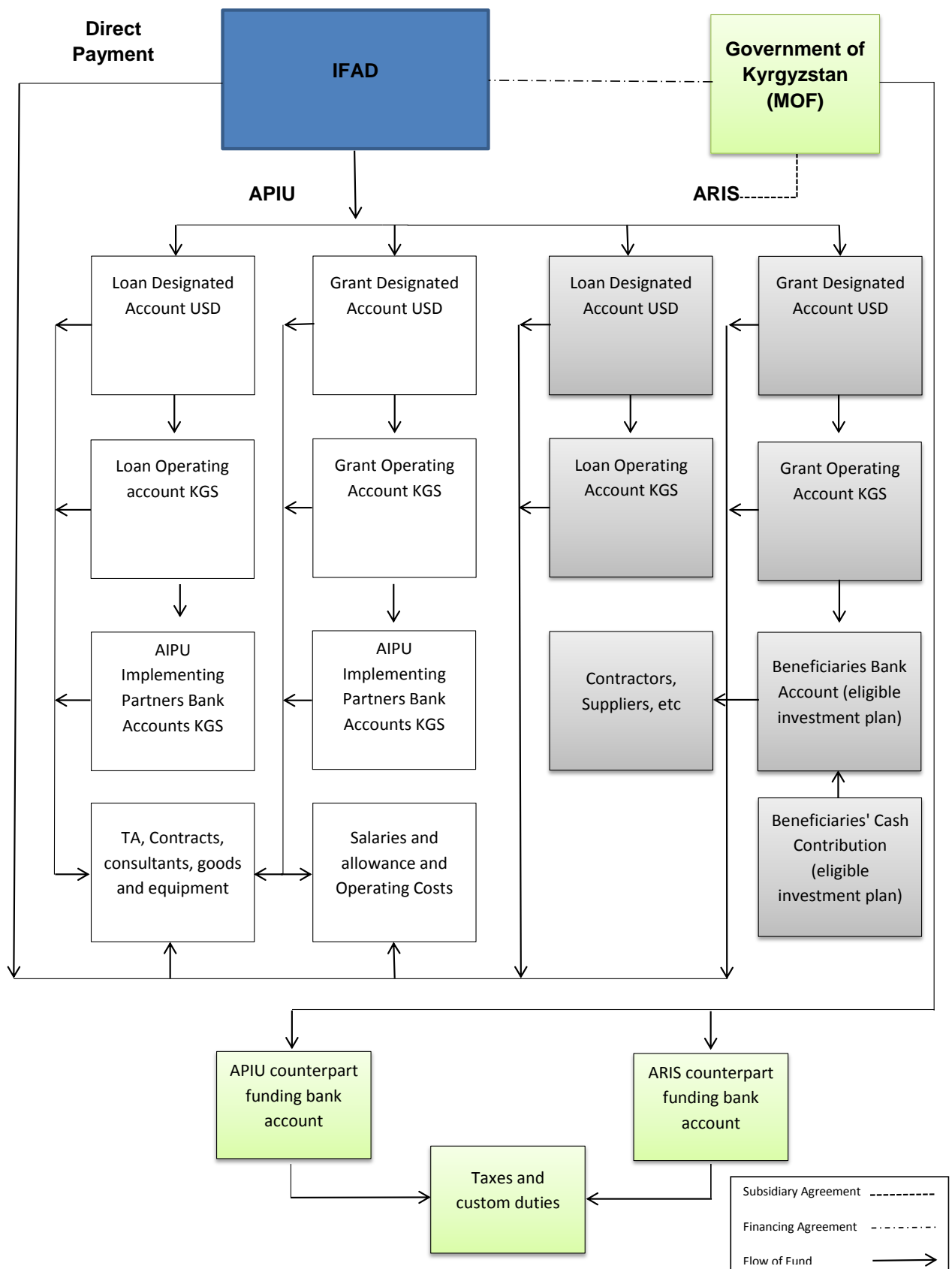
37. IFAD Loan and Grant proceeds cannot be utilized for Taxes and Customs duties payments and counterpart funding will cover taxes and customs duties.

Implementation Readiness:

38. **FM Actions Summary.** The actions required to mitigate FM risks are summarised below:

	Action	Responsible Party / Person	Target Date / Covenants
1	One disbursement officer to be hired for new project.	APIU Director	Within 3 months of effectiveness
2	Subsidiary Agreement between MOF and ARIS to be signed	MOF/ARIS Director	Disbursement Condition For ARIS Authorized allocation
3	Submit draft Project Implementation Manual to IFAD for approval	APIU and ARIS	Disbursement Condition
4	Install / Configure accounting software for the new Project	APIU and ARIS	Disbursement Condition
5	Submit draft TORs for external audit to IFAD for approval.	APIU	Every year prior to commencement of audit process
6	Internal auditor in year 3/ mid-term of project	APIU	To be hired at mid term

Appendix 7.1. Flow of Funds



Appendix 7.2: TERMS OF REFERENCE FOR THE AUDIT OF IFAD AND NON-IFAD FUNDED PROGRAMMES/PROJECTS

BACKGROUND

In accordance with relevant loan/financing agreements between the GoK and IFAD, the audit of the Access to Markets Project (ATMP) has to be carried out by an independent Auditor. The relevant financing agreement and Project design report are the main reference documents for the Audit. In case of contradiction between the Project Financing Agreement and the National Laws, the provisions of the former prevail. The sources of funds subject to audit under this ToR are: (a) IFAD-Loan No.____; (b) IFAD Grant No.____; (c) respective GoK funds; and (d) beneficiary contributions and Financial Services Providers (FSPs) financing.

OBJECTIVE

The objective of the audit of the Project Financial Statements (PFS) of the ATMP is to enable the auditor to express a professional opinion on the financial position of the ATMP at the end of each relevant reporting period and of the funds received and expenditures incurred as reported in the PFS, including an opinion on the statements of expenditure (SOE) and Special Accounts (SAs)/Designated Accounts (DAs). The financial reporting periods and relevant sources of funds subject of the audit are detailed below:

a) From (date, month year) to (date, month year) with respect to the ATMP including the following sources of funds: (a) IFAD- Loan No.____, (b) IFAD Grant No.____; (c) respective GoK funds; and (d) beneficiary contributions and FSP financing.

The ATMP will prepare three (3) separate set of financial statements which will be submitted to the auditor for review and testing activities. Auditors will be required to issue three (3) separate sets of opinions covering PFS, SOEs procedure and SAs/DAs

The information, both financial and non-financial, which is subject to verification by the auditor, is all information which makes it possible to verify that the expenditures claimed by the APIU in Financial Statements have occurred, and are accurate and eligible.

The Project's accounting system (books and records), and the ATMP's Financial Management Manual provide the basis for the preparation of the PFS, and have been maintained to ensure correct exposure of all financial transactions of the Project.

SCOPE

The audit will be carried out in accordance with International Standards of Auditing, as published by the International Auditing and Assurance Standards Board of the International Federation of Accountants (IFAC), with special reference to ISA 800 (Auditor's Report on Special Purpose Audit Engagements) and to relevant IFAD guidelines. The audit will include such tests and reviews, as the auditor consider necessary under the circumstances. In conducting the audit, special attention should be paid to the following: (a) All external funds have been used in accordance with the conditions stipulated in the financing agreements, with due attention to economy and efficiency, and solely for the purposes for which the financing was provided. The relevant financing agreements are: (a) IFAD Loan No.____; and (b) IFAD Grant No.____.

a) All external funds have been used in accordance with the conditions stipulated in the Financing Agreement, with due attention to economy and efficiency, and solely for the purposes for which the financing was provided. The relevant financing agreements are: (a) IFAD Loan No.____; and (b) IFAD Grant No.____.

- b) Counterpart funds for the ATMP have been provided by GoK and used in accordance with national or organizational financial regulations, with due attention to economy and efficiency, and solely for the purposes for which they were provided.
- c) Goods, consultancy and other services, and civil works financed out of Project funds have been procured in accordance with the relevant loan/financing agreements and/or Government regulations.
- d) All necessary supporting documents, records, and accounts have been kept in respect of all Project ventures, including expenditures reported via SOEs or SAs. Clear linkages should exist between the books of account and reports presented to IFAD.
- e) Whether the PFS are drawn up in conformity with internationally accepted accounting standards (IFRS or IPSAS) and give a true and fair view of the financial status of the Project at the end of each of the above listed reporting period and of the resources and expenditures for the periods ended on these dates.
- f) The SAs/DAs have been used in accordance with the provisions of the relevant loan/financing agreements.

In conducting the audit, the auditor shall carry out a physical verification of any significant assets purchased and confirm their existence and use for Project purposes.

The Auditor will test the financial transactions against documentary or other evidence necessary to satisfy the auditor as to the authenticity and correctness of the transactions, their complete and proper citing in the books of accounts, financial performance and status.

Programme Financial Statement

The PFS will include the following:

- Yearly and cumulative statements of sources and application of funds, which should disclose separately, and with respect to the relevant financing agreements, IFAD's funds, counterpart funds (Government), other donor funds and beneficiaries' funds;
- Balance sheet, which should disclose bank and cash balances (that should agree with the statement of sources and application of funds);
- Yearly and cumulative SOEs by withdrawal application and category of expenditures;
- Reconciliation of the SAs/DAs;
- Cumulative status of funds by category;
- A statement of comparison between actual expenditures and budget estimates;
- Notes accompanying the Financial Statements; and
- Consolidated financial statements, where the Programme consists of more than one entity.

Reconciliation between the amounts shown as received by the Project and those shown as being disbursed under each relevant Loan and financing agreement by IFAD and/or other financiers (SPECIFY AS APPLICABLE) should be attached as an annex to the PFS. As part of the reconciliation, the auditor will indicate the procedure used for the disbursement – SAs' funds, letters of credit, special commitments, reimbursement or direct payment – and indicate whether the expenditure is fully documented or uses the SOE format.

Statements of Expenditures

In addition to the audit of PFS, the auditor is required to audit all SOEs used as the basis for the submission of withdrawal applications. The auditor should apply such tests and controls, as the auditor considers relevant and necessary under the circumstances. SOE expenditures should be carefully reviewed to ascertain the eligibility under the relevant loan and financing agreements, donors' Letters to the Recipient and with reference to the Project's appraisal report for guidance when

necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, the auditor should separately note these. Annexed to the PFS should be a schedule listing individual SOE withdrawal applications by specific reference number and amount. The total withdrawals under the SOE procedure should be part of the overall reconciliation of IFAD and/or other financiers' disbursements described above.

The auditor should pay particular attention as to whether:

- g) the SOEs have been prepared in accordance with the provisions of the relevant Financing Agreement;
- h) expenditures have been made wholly and necessarily for the realization of the Project's objectives;
- i) information and explanation necessary for the purpose of the audit have been obtained;
- j) supporting records and documents necessary for the purpose of the audit have been retained; and
- k) the SOEs can be relied upon to support the related withdrawal applications.

Special Accounts

In conjunction with the audit of the PFS, the auditor is also required to audit the activities of the SA/DA associated with the programmes, including the Authorized Allocation or Initial Deposit. The auditor must form an opinion as to the degree of compliance with IFAD procedures and the balance of the SA/DA at year end. The audit should examine:

- a) Deposits and replenishments received from IFAD and/or other financiers;
- b) Payments substantiated by withdrawal applications;
- c) Interest that may accrue on the outstanding balances; and
- d) The year-end balances, and the use of correct exchange rates to convert local currency expenditures to USD.

As part of the opinion on the PFS, the audit report will include an opinion on SOEs and SAs, indicating the extent to which these procedures can be relied upon as a basis for loan disbursements under the Project.

Audit Reports

The auditors will issue the following audit report and opinion on the ATMP Financial Statements (refer to the "Project Financial Statements" paragraph above for a definition of the statements included therein): an Audit Report for the period from (date, month year) to (date, month year) with respect to the ATMP including the following sources of funds: (a) IFAD Loan No._____; (b) IFAD Grant No._____; (c) respective GoK funds; and (d) beneficiary and FSP contributions.

In addition, the auditor will prepare a "management letter", in which the auditor will:

- a) Give comments and observations on the accounting records, systems, procedures and internal controls that were examined during the course of the audit;
- b) Identify specific deficiencies and areas of weakness in systems and controls and make recommendation for improvement;
- c) Communicate any significant matters that have come to attention during the audit which might have a material impact on the implementation of the Project;
- d) Report on the lack of compliance of each financial covenant in the relevant Financing Agreement;
- e) Bring to the Recipient's attention any other matters that the auditors consider pertinent;

- f) A specific set of comments on activities under the Project Grants in relation to the accounting records, systems and controls that were examined during the course of the audit, achievement of the planned results of the Project; and
- g) Follow up on the remedial actions taken by the ATMP in response to previous audit findings and recommendations and report on the progress or otherwise.

The External Auditor should, apart from expressing an opinion on the financial condition of the Project, express an opinion on whether:

- a) The proceeds of respective financiers' loan/grant have been utilized only for the Project in accordance with the respective Financing Agreement;
- b) The financial information contains data as being necessary for inclusion on the Financial Statement;
- c) The financial information complies with relevant regulations and statutory requirements; and
- d) Procurement actions, which have not been subject to IFAD, and/or other financiers' prior review, are in compliance with relevant financiers' requirements.

The deadline for the submission of the audit report, including the management letter, is: No later than 30 May 20____.

The APIU should then promptly forward copies of the audited Project financial statements (including audit opinion) and the management letter to IFAD and other relevant financiers.

General

The responsibility for the preparation of financial statements including adequate disclosure is that of the management of ATMP. This includes the maintenance of adequate accounting records and internal controls, the selection and application of accounting policies, and the safeguarding of the assets of the entity. As part of the audit process, the auditor will request from management written confirmation concerning representations made to the auditor in connection with the audit.

The APIU/ARIS will co-operate fully with the auditor and will make available to the auditor whatever records, documentation and other information is requested by the auditor in connection with the audit. The auditor should be given access to all legal documents, correspondence, and any other information associated with the Project and deemed necessary by the auditor. Confirmation should also be obtained of amounts disbursed and outstanding at the Bank and of amounts disbursed under IFAD and other relevant financiers.

IFAD Guidelines on Project Audits (for Recipients' Use) dated 8 September 2003 outline IFAD's policy and procedures relating to the audit of IFAD-funded projects. The IFAD Guidelines on Project Audits are an integral part of these Terms of References and are to be followed for the Audit of IFAD funded projects, programmes and activities.

The auditor should understand that working papers under the ATMP could be subject to the review by authorized ATMP financiers' staff, including IFAD.

Appendix 8: Procurement

A. Procurement Capacity and Governance

1. On 3 April 2015, the Parliament of the Kyrgyz Republic adopted a new Law on Public Procurement⁷¹, which became effective on 14 May 2015 (PPL). The new law introduces, inter alia, framework agreements and a special commission for reviewing procurement-related disputes. Prior to the adoption of the new law, public procurement in the Kyrgyz Republic was regulated by the 2004 Public Procurement Law (the PPL 2004). The PPL 2004 was based on the 1994 UNCITRAL standards and was to a large extent outdated.

2. According to the 2011 assessment conducted by the EBRD, the PPL 2004 showed a medium level of compliance with international standards. The quality of public procurement practices has also shown medium level compliance, with “Enforceability” and “Uniformity” being the best ranking indicators. However, “Competition” ranked only mediocre, while “Economy of the Process” and “Transparency” ranked poorly.

3. The new PPL is developed drawing on best practices enshrined in UNCITRAL’s 2011 Model Law on Public Procurement, and based on recommendations of international institutions and experts. The PPL defines the mandate and authority of the independent public procurement oversight and regulatory body, the Public Procurement Authority (PPA) under the Ministry of Finance (MOF); and outlines the stages of the public procurement process. Procurement is undertaken exclusively in electronic format over a server maintained by the Procurement Authority, using the electronic templates that are in the system. It does not apply on procurements that have a relation to national safety, defense, state secrets or food safety.⁷² Kyrgyzstan is currently conducting accession talk to the Government Procurement Agreement (GPA).⁷³ GPA can play a role as a unified international legal framework that facilitates the achievement of balanced and optimal outcomes with respect to trade, governance, value for money and development.⁷⁴

4. There is no recent public procurement assessment undertaken by the WB or other international body. The WB continues to undertake procurement pursuant to its own procurement guidelines. In regard of procurement of consultancy services, the PPL is not compliant. Therefore, while the PPL represents a significant improvement of the PPL 2004, it is realistic to expect delays in the improvement of the practical aspects while the new system is being adopted. Moreover, in regard of procurement of consultancy services, the PPL and its application do not meet up to the standards of the WB and IFAD procurement rules. In view of the above, the mission deems that it is prudent to adopt the IFAD procurement guidelines for the ATMP.

B. Agency Capacity Assessment

5. As part of the initial design of the ATMP, IFAD undertook a procurement capacity assessment of the APIU, and ARIS⁷⁵, both of which will be responsible for managing and overseeing Project related procurement. The APIU was created as an entity in the MoAM, and is currently the implementing unit of the on-going IFAD investments in the country. ARIS is an agency for management of projects to contribute to the alleviation of rural poverty established among others by the administration of the President of the Kyrgyz Republic, and the Union of Legal Entities Association of Local Self-Governments of Villages and Settlements of the Kyrgyz Republic.

6. The main instrument utilised for this validation exercise was the IFAD procurement assessment tool and covered the various phases of the procurement cycle: planning, soliciting, evaluation, award and contract management.

⁷¹ <http://cbd.minjust.gov.kg/act/view/ru-ru/111125>

⁷² Article 1.3 ppl.

⁷³ https://www.wto.org/english/news_e/news16_e/gpro_17feb16_e.htm

⁷⁴ https://www.wto.org/english/tratop_e/gproc_e/gpa_symp092015_e.htm

⁷⁵ ARIS is an abbreviation from Агентство развития и инвестирования сообществ Кыргызской Республики.

7. Both the APIU and ARIS have a good track record with implementation of IFAD and World Bank procurement; the procurement function is separate from financial management; and the procurement units of both the APIU and ARIS are staffed with capable personnel. Overall, the procurement capacity and procedures are assessed as satisfactory in all aspects of advertisement, drafting of bidding documentation, evaluation and contract management. The APIU procurement unit consists of three staff responsible for procurement for three projects.⁷⁶ It is recommended that the ATMP finance an additional Procurement Assistant to the personnel of the APIU procurement unit.

C. Arrangements for Procurement under the Project

8. For each contract financed from IFAD proceeds, the Recipient and IFAD will agree in advance in the procurement plan the following: the types of procurement methods, the need for pre or post-qualification, estimated cost, prior review requirements and timeframe.

9. **Equipment and Goods and Civil Works** shall be procured adhering to the following thresholds for procurement methods:

- International competitive Bidding (ICB): Any contract estimated to cost more than US\$500 000 or equivalent or more;
- National Competitive Bidding (NCB): any contract estimated to cost more than US\$100 000 or equivalent or less than US\$500 000 or equivalent;
- National Shopping (NS): any contract estimated to cost less than US\$100 000 or equivalent;
- Direct Contracting (DC): any contract estimated to cost US\$ 0 000 ore equivalent.

10. **Consultancy services** shall be procured adhering to the following thresholds for procurement methods:

- Quality and Cost Based Selection (QCBS): Any contract estimated to cost US\$100 000 or more shall be awarded on the basis of QCBS, unless the use of another procurement method is expressly allowed. Advertising shall be international for any contract estimated to cost US\$ 200 000 or more and where there is expected to be interest internationally. Otherwise the advertising shall national.
- Quality Based Selection (QBS): Any contract for assignments which require high specialisation or where the best expertise is required without consideration of price may be awarded on the basis of QBS with due consideration of the principles set out in the Procurement Guidelines. Advertising shall be international for any contract estimated to cost US\$100 000 or more and where there is expected to be interest internationally. Otherwise the advertising shall national.
- Least Cost Selection (LCS): Any contract for consulting services of a routine nature estimated to cost US\$200 000 equivalent or less may be awarded on the basis of LCS from a shortlist prepared by the APIU/ ARIS and comprising three to six firms / individual consultants. Advertising shall be international for any contract estimated to cost US100 000 or more and where there is expected to be interest internationally. Otherwise the advertising shall national.
- Selection Based on Consultant's Qualifications (CQS): Any contract for consulting services of a routine nature estimated to cost US\$200 000 equivalent or less may be awarded on the basis of CQS from a shortlist prepared by the APIU/ARIS and comprising three to six firms/ individual consultants. Advertising shall be international for any contract estimated to cost US\$100 000 or more and where there is expected to be interest internationally. Otherwise the advertising shall national.
- Individual Consultant Selection (IC): Any contracts for consulting services estimated to cost US\$100 000 equivalent or less may be awarded on the basis of IC with due consideration of the principles set out in the Procurement Guidelines.

⁷⁶ These comprise the IFAD financed LMDP I and LMDP II, and the World Bank financed Pasture Improvement Management Project

- Sole Source Selection (SSS): As an exception to the above, contracts estimated to cost US\$50 000 equivalent or less may be awarded on the basis of SSS.

D. Prior Review of Procurement Decisions by IFAD

11. For purposes of IFAD's Procurement Guidelines, the following shall be subject to prior review by the Fund:
 - Award of any contract for works and goods estimated to cost more than US\$200 000 or equivalent;
 - The award of any contract for consulting services estimated to cost more than US\$100 000 or equivalent;
 - The award of any contract on the basis of DC or SSS.
12. The aforementioned thresholds may be modified by the Fund during the course of Project implementation.
13. All contracts, with or without prior IFAD approval, shall be listed in the register of contracts with the dates of approval. As this report facilitates the review and approval of payment requests on contracts, the register needs to be updated and submitted to the IFAD Country Programme Manager on a monthly basis.
14. **Post review.** All other contracts will be subject to post-review and procurement audit by IFAD. The ATMP procurement staff will maintain accurate records and separate files for each procurement activity. Details with regards to the content of a procurement file or dossier can be found in the Module C of the IFAD's Procurement Handbook.
15. All contracts, with or without IFAD prior approval, should be listed in the register of contract maintained by the ATMP procurement sections within the APIU and ARIS. When a contract is amended, the amendment will be recorded in the document. If a contract is cancelled, the information should also be recorded, providing the relevant background. The sample form to be used and instructions are detailed in the Annex 6 of IFAD's Loan Disbursement Handbook. It would also be necessary for the ATMP procurement sections within the APIU and ARIS to prepare an updated PP on procurement transactions carried out by the project for inclusion in the annual and semi-annual Progress Report.
16. **Bidding Documents.** All bidding documents for the procurement of works, goods and services shall be prepared by the ATMP procurement sections within the APIU and ARIS with the support of technical experts, as needed, who will provide specifications, terms of reference, and bill of quantities and so forth as required.
17. **Responsibility.** The procurement sections within the APIU and ARIS will be responsible for undertaking the following tasks: (i) consolidate annual procurement plans; (ii) implementation and monitoring of procurement activities; (iii) interface with IFAD for procurement reporting; and (iv) ensure that the procurement under the Project is undertaken in line with the Project Design Report and IFAD Procurement Guidelines.
18. The following basic principles shall guide the work of the ATMP while implementing the procurement activities: (i) economy and efficiency; (ii) equal opportunities to all eligible bidders; and (iii) fairness, transparency, integrity and good governance.

Annex 1: EIGHTEEN-MONTH PROCUREMENT PLAN

		APIU PROCUREMENT PLAN FOR 2017-2018														
		CIVIL WORKS														
Original: Project design completion (July 2016)																
Period: July 2017 - December 2018																
#	Description of Goods	Plan vs. Actual	Estimated cost (US\$)	Package No.	Procurement Method	IFAD Review (Prior/Post)	BD Preparation	Date of Draft BD to IFAD	IFAD No-objection to BD	Bid Invitation	Bid Opening	Evaluation and Award Recommendation	IFAD No-objection to Contract Award	Contract signing	Contract Completion	Comments
Component 3: Upgrading the Kyrgyz Livestock Sanitary System																
1	Renovation of SI HQ and oblast offices	Plan	35 000	CW-S-1	Shopping	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Sep 2017	Oct 2017	Oct 2017		
		Actual														
2	Renovation of SI district offices	Plan	99 000	CW-S-2	Shopping	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Sep 2017	Oct 2017	Oct 2017		
		Actual														
3	Renovation of PPR vaccine cold storages	Plan	5 000	CW-S-3	Shopping	Post	Jul 2017	N/A	N/A	Aug 2017	Aug 2017	Sep 2017	N/A	Sep 2017		
		Actual														
4	Renovation of 2 regional vet labs	Plan	300 000	CW-NCB-1	NCB	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Sep 2017	Oct 2017	Oct 2017		
		Actual														

Abbreviations:

APIU - Agricultural Projects Implementation Unit

SIVPSS - State Inspectorate for Veterinary and Phyto-Sanitary Security

KVA - Kyrgyz Vet Association

VetC - Veterinary Chamber

LE - Leading Enterprise

VC - Value Chain

TOT - Training of Trainers

AI - Animal Identification

MoAM - Ministry of Agriculture and Melioration of KR

KSRVI - Kyrgyz Scientific and Research Veterinary Institute

KSRLPI - Kyrgyz Scientific and Research Livestock and Pasture Institute

VHC - Village Health Committee

PVS - Private Veterinary Services

OIE - World Organisation for Animal Health

MIS - Management Information System

NCB - National Competitive Bidding

Procurement - National/Local Shopping

Ind. - Individual Consultants Selection

CQS - Consultant Qualification Selection

DC - Direct Contracting

SSS - Single Source Selection

ITA - International Technical Assistance (Consulting Service)

LTA - Local Technical Assistance (Consulting Services)

N/A - Not Applicable

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Original: Project design completion (July 2016)		APIU PROCUREMENT PLAN FOR 2017-2018														
Period: July 2017 - December 2018		GOODS														
#	Description of Goods	Plan vs. Actual	Estimated cost (US\$)	Package No.	Procurement Method	IFAD Review (Prior/Post)	BD Preparation	Date of Draft BD to IFAD	IFAD No-objection to BD	Bid Invitation	Bid Opening	Evaluation and Award Recommendation	IFAD No-objection to Contract Award	Contract signing	Contract Completion	Comments
	Component 3: Upgrading the Kyrgyz Livestock Sanitary System															
1	Computers and office equipment (printer, copier, scanner, TV-set, conditioner and etc) for SIVPSS HQ and oblast/district offices	Plan	99 000	S-1	Shopping	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Sep 2017	Oct 2017	Oct 2017		
		Actual														
2	Field equipment for SI district offices	Plan	200 000	ICB-1	ICB	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017		
		Actual														
3	Mobile biological waste incinerator trailers	Plan	78 000	ICB-2	ICB	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017		
		Actual														
4	PPR & disease emergency vaccine	Plan	1 470 000	ICB-3	ICB	Prior	Jan 2018	Feb 2018	Feb 2018	Feb 2018	Apr 2018	May 2018	Jun 2018	Jun 2018		
		Actual														
5	Vehicles for SI HQ and oblast offices	Plan	430 000	NCB-1	ICB	Prior	Jul 2017	Aug 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017		
		Actual														
6	Computers, printers, stabilizers, etc for Dairy/Sheep VC AI	Plan	22 000	S-2	Shopping	Post	Sep 2017	N/A	N/A	Sep 2017	Oct 2017	Oct 2017	N/A	Oct 2017		
		Actual														
7	Ear tags for cattle	Plan	800 000	ICB-4	ICB	Prior	Jul 2017	Aug 2017	Sep 2017	Sep 2017	Nov 2017	Nov 2017	Dec 2017	Jan 2018		
		Actual														
8	Ear tags for sheep	Plan	380 000	ICB-5	ICB	Prior	Jul 2017	Aug 2017	Sep 2017	Sep 2017	Nov 2017	Nov 2017	Dec 2017	Jan 2018		
		Actual														
9	Office equipment for Vet Chamber	Plan	19 000	S-3	Shopping	Post	Sep 2017	N/A	N/A	Sep 2017	Oct 2017	Oct 2017	N/A	Oct 2017		
		Actual														
10	Vehicle for Vet Chamber	Plan	25 000	S-4	Shopping	Post	Sep 2017	N/A	N/A	Sep 2017	Oct 2017	Oct 2017	N/A	Oct 2017		
		Actual														

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Original: Project design completion (July 2016)		APIU PROCUREMENT PLAN FOR 2017-2018																							
Period: July 2017 - December 2018		CONSULTING SERVICES																							
#	Description of Services	Plan vs. Actual	Estimated cost (US\$)	Package No.	Firm or Ind.	Selection Method	IFAD Review (Prior/Post)	TOR Preparation	IFAD No-objection to TOR	EOI/Advertisement Preparation	Request for Exp. Of Interest/Advertisement	Draft RFP (incl. TOR, Short List)	IFAD No-objection to RFP (full package)	RFP Issued	Date of Proposal Submission	Tech. Evaluation Report (TER)	IFAD No-objection to TER	Combined Tech & Fin Eval. Report	Draft Final Contract	IFAD No-objection to Draft Contract	Contract signing	Contract Completion	Comments		
Component 1: Livestock Value Chains Development																									
1	LTA: Identification of Leading Entities (LE)	Plan	81 000	CQ-1	Company	CQS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Dec 2017	Dec 2017	Jan 2018	N/A	Jan 2018	Feb 2018	Feb 2018				
		Actual																							
2	ITA: VCD Adviser	Plan	100 000	Ind. -1	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017				
		Actual																							
3	LTA: Support to preparation of business plans (at least 5 individuals would be recruited)	Plan	50 000	Ind. -2/6	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Aug 2017	N/A	N/A	N/A	N/A	Sep 2017	Sep 2017	N/A	Oct 2017	Nov 2017	Nov 2017				
		Actual																							
4	LTA: Assessment of VCDBPs (at least 6 individuals would be recruited)	Plan	5 000	Ind. -7/12	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017				
		Actual																							
5	ITA: VC Training Adviser	Plan	100 000	Ind. -13	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017				
		Actual																							
6	ITA: Development of training modules and TOT (BAS should be sub-contracted for TOT of processors)	Plan	364 000	QCBS-1	Company	QCBS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Jan 2018	Feb 2018	March 2018	Apr 2018	May 2018	Jun 2018	Jun 2018				
		Actual																							
7	LTA: Training of VC actors - aggregators	Plan	68 000	CQ-2	Company	CQS	Prior	March 2018	Apr 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Jul 2018	Aug 2018	Aug 2017	Sep 2018	N/A	Sep 2018	Oct 2018	Oct 2018				
		Actual																							
8	LTA: Training of VC actors - processors (BAS)	Plan	131 000	SSS-1	Company	SSS	Prior	Aug 2018	Sep 2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sep 2018	Oct 2018	Oct 2018			
		Actual																							
9	LTA: Training of VC actors - vets	Plan	118 000	CQ-3	Company	CQS	Prior	March 2018	Apr 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Jul 2018	Aug 2018	Aug 2017	Sep 2018	N/A	Sep 2018	Oct 2018	Oct 2018				
		Actual																							

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Component 3: Upgrading the Kyrgyz Livestock Sanitary System																					
10	ITA: Active surveillance, risk assessment, epidemiology	Plan	120 000	Ind. -14	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017
		Actual																			
11	LTA: SI Technical Unit Coordinator	Plan	21 600	Ind. -15	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
12	LTA: SI Technical Unit Lawyer	Plan	21 600	Ind. -16	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
13	LTA: SI Technical Unit Epidemiologist	Plan	21 600	Ind. -17	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
14	LTA: SI Technical Unit IT Specialist	Plan	21 600	Ind. -18	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
15	LTA: SI Communication	Plan	30 000	CQ-4	Company	CQS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Dec 2017	Dec 2017	Jan 2018	N/A	Jan 2018	Feb 2018	Feb 2018
		Actual																			
16	LTA: Training of SI staff	Plan	20 000	CQ-5	Company	CQS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Dec 2017	Dec 2017	Jan 2018	N/A	Jan 2018	Feb 2018	Feb 2018
		Actual																			
17	ITA: Training for AI system (Dairy/Sheep VC)	Plan	83 000	Ind. -19	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017
		Actual																			
18	LTA: Dairy VC AI Database maintenance (2 persons)	Plan	15 000	Ind. -20/21	Ind	Ind	Post	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
19	LTA: Sheep VC AI Database maintenance (2 persons)	Plan	24 000	Ind. -22/23	Ind	Ind	Post	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
20	LTA: Kyrgyz Vet Association Trainers (2 individuals)	Plan	30 000	Ind. -24/25	Ind	Ind	Prior	Sep 2017	Oct 2017	Oct 2017	Oct 2017	N/A	N/A	N/A	N/A	Nov 2017	Dec 2017	N/A	Dec 2017	Jan 2018	Jan 2018
		Actual																			
21	LTA: KVA bookkeeper	Plan	12 000	Ind. -26	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
22	ITA: KVA TOT and monitoring	Plan	61 000	Ind. -27	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017
		Actual																			
Component 4: Project Management																					
23	LTA: Grievance redress mechanism	Plan	5 000	Ind. -28	Ind	Ind	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	N/A	N/A	N/A	N/A	Oct 2017	Nov 2017	N/A	Nov 2017	Dec 2017	Dec 2017
		Actual																			
24	LTA: Audit	Plan	30 000	CQ-6	Company	CQS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Dec 2017	Dec 2017	Jan 2018	N/A	Jan 2018	Feb 2018	Feb 2018
		Actual																			
25	LTA: Baseline survey	Plan	35 000	CQ-7	Company	CQS	Prior	July 2017	Aug 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Nov 2017	Dec 2017	Dec 2017	Jan 2018	N/A	Jan 2018	Feb 2018	Feb 2018
		Actual																			
26	LTA: VC Specialist	Plan	15 000	Ind. -29	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			
27	LTA: RF Specialist	Plan	15 000	Ind. -29	Ind	Ind	Prior	July 2017	Jul 2017	Jul 2017	Jul 2017	N/A	N/A	N/A	N/A	Aug 2017	Aug 2017	N/A	Sep 2017	Sep 2017	Sep 2017
		Actual																			

Appendix 9: Project cost and financing

A. Introduction

19. This section describes the assumptions underlying the derivation of Project costs, estimated Project costs and financing plan. The Project costs are based on June 2016 prices. Some of the key parameters are presented below.

20. Project Period. The proposed project would be financed over a five-year period.

21. Inflation. The estimates of the National Bank of the Kyrgyz Republic for the consumer price inflation in 2016-18 is 5-7%, while EIU inflation forecast for Kyrgyzstan is around 7%. Therefore 6.5% of inflation was set as a base for the analysis for the whole project period 2017-2021.

22. Exchange Rate. The Base Exchange rate for this analysis has been set at KGS 69 to US\$1 as an official exchange rate prevailing in June-July 2016.

23. The Project costs are presented in both KGS and US\$. Conversions from current US\$ values into Kyrgyz Som use the following constant purchasing power exchange rates:

Table 7: Constant Purchasing Power Exchange Rates (KGS/US\$)

Up to Project Start	PY1	PY2	PY3	PY4	PY5
69.0	70.4	73.1	76.0	78.9	82.0

24. Taxes and Duties. Overall, the items to be imported for the Project do not attract any import and excise duties. However, there is VAT of 12% levied on all imported and locally procured goods and services. International technical assistance carries a 10% tax on non-residents. For directly recruited local staff and national technical assistance, the Project would cover the employer's tax of 17.25% (Social Insurance). The Government would finance the cost of all taxes on goods and services procured under the Project.

25. Expenditure Accounts. The expenditure accounts, together with the breakdown of taxes, physical contingencies and the average rates for foreign exchange used in the analysis are shown in Table 8 below. Physical contingencies have only been applied on the items for which the required amounts could not be reasonably estimated, and have not been applied to the funds earmarked for the grants as they follow a demand-driven delivery scheme.

Table 8: Expenditure Accounts

Description	Taxes (share in total costs)	Physical Contingency	Foreign Exchange
Investment Costs			
Equipment and Goods	10.7%	10%	70%
Vehicles	10.7%	0%	80%
Technical Assistance			
International TA	9%	0%	91%
National TA	0%	0%	0%
Training and Workshops	0%	0%	0%
Grants	0%	0%	60%
External Credit	0%	0%	60%
Civil Works	10.7%	10%	0%
Recurrent Costs			
Salaries	0%	0%	0%
Social Fund	0%	0%	0%
Operating Expenses	10.7%	5%	30%

26. Project Investment Component Structure. The Project has four components, as follows:

- Livestock Value Chains Development
- Livestock Value Chains Financing
- Upgrading the Kyrgyz Livestock Sanitary System
- Project Management.

27. Project Organisation and Management. Overall implementation responsibility will rest with the APIU and ARIS in line with the similar arrangements established under the LMDP.

B. Project Costs

28. The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 55.4 million (KGS 3.9 billion). Physical and price contingencies are low at 2% of the total Project costs due to the fact that investments associated with the various grants and external credits represent around 66% of the total Project costs (expressed as a lump sum, no contingencies). The foreign exchange component is estimated at US\$ 29.5 million or about 53% of the total Project costs. Taxes and duties make up approximately US\$ 1.18 million. The project management cost makes about 3% of the total Project costs. The summary and detailed cost tables are presented in Attachment 1 and 2 to Working Paper 4. Attachment 3 to Working Paper 4 provides the assumptions behind calculations of unit costs and physical quantities.

Table 9: Project Costs by Component

	(KGS Million)			(USD '000)			%	%
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
A. Component 1. Livestock Value Chains Development								
1. Subcomponent 1.1 Capacity Building of Livestock Value Chain Stakeholders	236,2	78,0	314,2	3 423,2	1 131,0	4 554,2	25	8
2. Subcomponent 1.2 Product Aggregation Enhancement	297,5	446,3	743,8	4 312,0	6 468,0	10 780,0	60	20
3. Subcomponent 1.3 Platform for Public-Private-Producers Partnerships Development and Knowledge Management	19,1	1,8	20,8	276,5	25,5	302,0	8	1
Subtotal Component 1. Livestock Value Chains Development	552,8	526,1	1 078,9	8 011,8	7 624,5	15 636,2	49	29
B. Component 2. Livestock Value Chains Financing								
1. Subcomponent 2.1. Access to External Credit Lines	690,0	1 035,0	1 725,0	10 000,0	15 000,0	25 000,0	60	46
2. Subcomponent 2.2. Innovative Financial Products	47,6	-	47,6	690,0	-	690,0	-	1
Subtotal Component 2. Livestock Value Chains Financing	737,6	1 035,0	1 772,6	10 690,0	15 000,0	25 690,0	58	47
C. Component 3. Upgrading the Kyrgyz Livestock Sanitary System								
1. Subcomponent 3.1 Strengthening the State Veterinary Sanitary System	284,1	401,2	685,3	4 117,4	5 814,8	9 932,2	59	18
2. Subcomponent 3.2. Strengthening the Private Veterinary Practice System	32,4	14,1	46,5	469,1	204,4	673,5	30	1
3. Subcomponent 3.3. Strengthening the Supporting State Institutions	30,6	15,9	46,5	443,7	230,3	674,0	34	1
Subtotal Component 3. Upgrading the Kyrgyz Livestock Sanitary System	347,1	431,2	778,3	5 030,2	6 249,5	11 279,7	55	21
D. Project Management								
Project Management	85,9	10,0	95,9	1 245,5	144,3	1 389,7	10	3
Monitoring and Evaluation	12,1	0,3	12,4	174,7	4,8	179,5	3	-
Subtotal Project Management	98,0	10,3	108,3	1 420,2	149,1	1 569,2	9	3
Total BASELINE COSTS								
	1 735,5	2 002,6	3 738,1	25 152,1	29 023,0	54 175,1	54	100
Physical Contingencies	16,3	19,7	36,0	235,5	285,9	521,4	55	1
Price Contingencies	90,6	42,2	132,8	483,6	227,2	710,8	32	1
Total PROJECT COSTS	1 842,4	2 064,5	3 906,8	25 871,3	29 536,1	55 407,4	53	102

C. Financing

29. An IFAD loan, US\$12.7 million (23% of the total Project costs), would finance: 22% of the Livestock Value Chains Development Component (US\$3.49 million), 65.6% of the Upgrading the Kyrgyz Livestock Sanitary System Component (US\$7.99 million) and 72.9% of the Project Management Component (US\$1.2 million). An IFAD grant of US\$12.7 million (23% of the total Project costs) would be used to finance: 56.9% of the Livestock Value Chains Development Component (US\$9.02 million), 2.7% of the Livestock Value Chains Financing Component (US\$0.65 million), 21.1% of the Upgrading the Kyrgyz Livestock Sanitary System Component (US\$ 2.57 million) and 25.4% of the Project Management Component (US\$0.42 million). It is expected that the FSPs' contribution would be US\$20.0 million, which would be used to finance

78% of the Livestock Value Chains Financing Component. The Government contribution is estimated at US\$ 1.6 million (3%) and includes contributions from its budget primarily to cover a part of SIVPSS O&M costs as well as all taxes (see below). The project beneficiaries' contribution is estimated at US\$8.39 million, which would be used to finance 20.8% of the Livestock Value Chains Development Component and 19.5% of the Livestock Value Chains Financing Component.

30. The Government contribution would cover all taxes and duties on all Project inputs that involve funding from the IFAD Loan/Grant or any other external source of funding associated with the IFAD Loan/Grant. In addition, the Government is expected to contribute from its budget about US\$430 thousand to cover a part of the operational costs to support the SIVPSS. The estimate of taxes and duties was based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to apply to the Project.

31. Tables 10 and 11 below provide summaries by the Project components and expenditure accounts of the proposed financing arrangement. The other summary financing tables are provided in Attachment 1 of Working Paper 4.

Table 10: Financing Plan by Components (US\$)

	IFAD Loan		IFAD Grant		FSP		Ben Contribution		GOVT: Taxes		GOVT: Budget		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Component 1. Livestock Value Chains Development														
1. Subcomponent 1.1 Capacity Building of Livestock Value Chain Stakeholders	-	-	4 708	98,9	-	-	-	-	54	1,1	-	-	4 762	8,6
2. Subcomponent 1.2 Product Aggregation Enhancement	3 490	32,4	4 000	37,1	-	-	3 290	30,5	-	-	-	-	10 780	19,5
3. Subcomponent 1.3 Platform for Public-Private-Producers Partnerships Development and Knowledge Management	-	-	307	99,1	-	-	-	-	3	0,9	-	-	310	0,6
Subtotal Component 1. Livestock Value Chains Development	3 490	22,0	9 015	56,9	-	-	3 290	20,8	57	0,4	-	-	15 852	28,6
B. Component 2. Livestock Value Chains Financing														
1. Subcomponent 2.1. Access to External Credit Lines	-	-	-	-	20 000	80,0	5 000	20,0	-	-	-	-	25 000	45,1
2. Subcomponent 2.2. Innovative Financial Products	-	-	690	100,0	-	-	-	-	-	-	-	-	690	1,2
Subtotal Component 2. Livestock Value Chains Financing	-	-	690	2,7	20 000	77,9	5 000	19,5	-	-	-	-	25 690	46,4
C. Component 3. Upgrading the Kyrgyz Livestock Sanitary System														
1. Subcomponent 3.1 Strengthening the State Veterinary Sanitary System	7 588	70,6	1 698	15,8	-	-	-	-	1 028	9,6	430	4,0	10 743	19,4
2. Subcomponent 3.2. Strengthening the Private Veterinary Practice System	79	11,0	511	71,0	-	-	100	13,9	29	4,1	-	-	720	1,3
3. Subcomponent 3.3. Strengthening the Supporting State Institutions	327	44,8	364	49,9	-	-	-	-	39	5,4	-	-	731	1,3
Subtotal Component 3. Upgrading the Kyrgyz Livestock Sanitary System	7 994	65,6	2 573	21,1	-	-	100	0,8	1 097	9,0	430	3,5	12 194	22,0
D. Project Management														
Project Management	1 201	81,3	250	16,9	-	-	-	-	26	1,8	-	-	1 478	2,7
Monitoring and Evaluation	17	8,8	174	90,2	-	-	-	-	2	1,1	-	-	193	0,3
Subtotal Project Management	1 218	72,9	424	25,4	-	-	-	-	28	1,7	-	-	1 671	3,0
Total PROJECT COSTS	12 702	22,9	12 703	22,9	20 000	36,1	8 390	15,1	1 182	2,1	430	0,8	55 407	100,0

Table 11: Financing Plan by Expenditure Accounts (US\$)

	IFAD Loan		IFAD Grant		FSP		Ben Contribution		GOVT: Taxes		GOVT: Budget		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs														
A. Goods														
Goods, Equipment and Materials	5 810	89,3	-	-	-	-	-	-	696	10,7	-	-	6 506	11,7
B. Vehicles														
Vehicles	1 227	89,3	-	-	-	-	-	-	147	10,7	-	-	1 374	2,5
C. Technical Assistance														
International TA	-	-	1 393	91,0	-	-	-	-	138	9,0	-	-	1 530	2,8
National TA /a	-	-	5 628	98,6	-	-	79	1,4	-	-	-	-	5 706	10,3
Subtotal Technical Assistance	-	-	7 020	97,0	-	-	79	1,1	138	1,9	-	-	7 237	13,1
D. Training and Workshops														
Training and workshops	-	-	648	100,0	-	-	-	-	-	-	-	-	648	1,2
E. Grants	3 490	32,4	4 000	37,1	-	-	3 290	30,5	-	-	-	-	10 780	19,5
F. Technology Grants	-	-	1 000	100,0	-	-	-	-	-	-	-	-	1 000	1,8
G. External Credit	-	-	-	-	20 000	80,0	5 000	20,0	-	-	-	-	25 000	45,1
H. Civil Works	524	89,3	-	-	-	-	-	-	63	10,7	-	-	586	1,1
Total Investment Costs	11 050	20,8	12 669	23,8	20 000	37,6	8 369	15,8	1 044	2,0	-	-	53 131	95,9
II. Recurrent Costs														
A. Salaries and Allowances	857	100,0	-	-	-	-	-	-	-	-	-	-	857	1,5
B. Social Fund	125	100,0	-	-	-	-	-	-	-	-	-	-	125	0,2
C. Operating Expenses														
Vehicles	534	50,0	11	1,1	-	-	7	0,6	114	10,7	401	37,6	1 068	1,9
Office	113	65,0	16	9,4	-	-	11	6,2	19	10,7	15	8,7	174	0,3
Other	23	43,7	6	12,4	-	-	4	8,3	6	10,7	13	24,9	52	0,1
Subtotal Operating Expenses	670	51,8	34	2,6	-	-	22	1,7	138	10,7	430	33,2	1 294	2,3
Total Recurrent Costs	1 652	72,6	34	1,5	-	-	22	1,0	138	6,1	430	18,9	2 277	4,1
Total PROJECT COSTS	12 702	22,9	12 703	22,9	20 000	36,1	8 390	15,1	1 182	2,1	430	0,8	55 407	100,0

32. **Implications for Government Budget.** Apart from repayment of the IFAD loan, implications for Government's budget are limited in terms of its contribution to the Project costs: the MOF will need to make annual allocations in the state budget to cover additional O&M expenditures incurred by the SIVPSS amounting to about US\$260 thousand as well as another allocation of about US\$1.3 million every eight years for the replacement of SIVPSS's vehicles.

Appendix 10: Economic and Financial Analysis

I. Introduction

33. The goal of the ATMP is to contribute to the reduction of poverty and enhanced economic growth in pastoralist communities. The Project objective is improved access and integration of smallholder livestock farmers with remunerative markets for their products, leading to improved and equitable returns. The Project would be country-wide and demand-driven. Its primary target group are smallholder livestock farmers who participate in and benefit from improved value chains. A great majority of livestock owners in Kyrgyzstan are smallholders, and the poor constitute an important share. The other beneficiary groups consist of: (i) input suppliers and service providers; (ii) private vets; (iii) agro-processors; (iv) national scientific and academic institute staff; and (v) the rural unemployed for whom Project support is expected to create greater decent employment opportunities at farm and processing levels of targeted value chains.

34. There are numerous examples of forward and backward linkages between agricultural producers and other entities within livestock value chains. Traditional farm and enterprise models are a useful but not sufficient tool for measuring the Project's objective of mobilising investments to accelerate economic development including employment opportunities. The models presented below are aiming to demonstrate how the Project and beneficiaries would apply the VC approach to assess opportunities for and constraints to economic development. They are for demonstration purposes only and to be used as building blocks for value chain models. The analysis presents typical livestock farm and enterprise models that then compose the representative livestock production and processing value chains. Moreover, the value chain model estimates average incremental net benefits per US\$1 of investments that would be used for the calculation of an overall incremental benefit stream of the Project.

II. Project Benefits

35. The Project is expected to lead to increased income of farmers, households and rural entrepreneurs. Benefits would accrue from: (i) increased livestock productivity and increase livestock produce due to the application of improved inputs/technology and enhanced husbandry; (ii) an increased proportion of marketed farm produce; (iii) reduced losses during production and processing of dairy and meat produce through innovative technology; (iv) improved quality and safety of agricultural and food products, thus attracting higher prices as a result of the demand by processors for more reliable outputs; (v) revival and increase of export of livestock commodities; (vi) avoided costs of zoonotic diseases (PPR and others) due to improved animal sanitary system; (vii) enhanced access to larger and longer-term credit; (viii) increased employment, either for hired or family labour, for both on-farm and off-farm activities; and (ix) tax revenues as a result of increased volume of taxable production. Principal increases in incomes would be largely dependent on farmers/household/rural entrepreneurs adopting proposed activities, which the Project will promote directly through the VC development, thus improving the market access, supporting marketing linkages and private sector development, and generally creating a favourable economic environment that encourages farmers/rural entrepreneurs to produce more competitive products.

III. Financial Analysis

36. A number of indicative economic activities, which may be supported by the ATMP, were identified during the design process. Eight illustrative models were prepared to demonstrate the financial viability of potential investments: six farm models and two processing enterprise models. All models show the prospective benefits and rate of return derived from the access to required financing (loans), training, demonstrations and advisory services. These models were used as building blocks for the dairy and meat value chain models (VCMs).

37. The basis of this analysis is an illustration of the interrelationships between the primary producers and the rural enterprises in the value chain potentially to be supported by the ATMP. Specifically, the dairy VCM describes enhanced aggregation of milk due to improved linkages between stakeholders, eased access to finance, improved breeds and husbandry leading to greater productivity of livestock to meet the demand for milk from dairy processors via collection centres. The meat VCM describes emerging cattle feeding farms due to improved access to finance, improved feeds, breeds and husbandry leading to a greater productivity of livestock to meet the demand for meat from the domestic and export markets.

IV. Key Assumptions

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

39. **Prices.** Prices for commodities/inputs reflect annual average and those actually paid/received by the farmer/entrepreneur, and imply potential risks. A list of prices used in the analysis is found in Table 1, Working Paper 5 (Project file).

40. **Interest.** The interest rates that currently prevailing in Kyrgyzstan were used in the analysis: 14-16% for long-term loans and 15% for agricultural short-term loans (1.25% per month).

41. **Lending Terms.** The length of the seasonal or short-term loans is up to one year. Long-term loans are expected to be repaid in equal instalments over an up to a five-year period, depending on the investment. The long-term loans were assumed to have a one-year grace period. Interest on the entire amount outstanding would be paid during the grace period.

42. **Farm/Enterprise Characteristics.** The models show only incremental revenues and costs generated by the new investment. In each case, the result of the investment translates into additional demand for produce from primary producers and new permanent jobs.

43. **Internal Rate of Return.** The internal rate of return (IRR) of 8% is used in this analysis to assess the viability and robustness of investments.⁷⁷ The selection criterion for the IRR is to accept all projects for which the IRR is above the opportunity cost of capital, i.e. 8%. Using the IRR as the measure, the models' sensitivity to the changes in parameters can be assessed by varying the cost of investments, production costs and revenues.

44. More details on production and financial parameters for the models are found in Tables 2-13, Working Paper 5 (Project files).

V. Farm and Rural Enterprise Models

45. This section provides an example of the practical application of the VC approach as well as the findings of the analysis for the dairy and meat value chains. It intends to provide an indication of how the VC approach would be applied in the context of implementation of ATMP. As such, it does not represent the only element or indication for supporting particular enterprises, sub-sectors and/or activities and would have to be assessed in conjunction with the other ATMP eligibility criteria. Moreover, the models take into account only the incremental revenues and labour opportunities generated by participating farmers and processors, and do not consider those that might be generated by the "extended value chains".

⁷⁷ The IRR is a measure of the project's worth that in this case compares the return on the investment with the best alternative use of the funds, i.e. a refinancing rate of the National Bank of the Kyrgyz Republic.

46. The Project management, however, would be required to have a broader perspective for its planning purposes, taking into account potential value chains, food safety, animal health, social needs, land management, environmental concerns, etc. balancing between the needs of one value chain with those of others and the aspirations of potential beneficiaries. It is expected that a thorough analysis of constraints and opportunities would lead to the type of decisions/response required for the potential value chains.

47. A detailed description of the farm/rural enterprise models is provided within the section on value chain models and Tables 2-13 of Working Paper 5 (Project files), while the summary is presented in Tables 12 and 13 below.

48. **Summary.** The main result of the financial analysis include: (i) a significant increase in gross and net returns from each model compared with and without-project situation: (ii) sufficient benefit/cost ratios illustrating the worthiness of the investments. The NPV ranges from US\$291 to US\$ 686,996, while, the IRRs from 14% to 57%, which are comparable to those estimated for similar operations in neighbouring Tajikistan, Uzbekistan and South Kazakhstan. The analysis showed that the models are more sensitive to changes in both productivity and price assumptions than they are to variations in investment and operating costs. Sensitivity analysis also showed that all models, except for the purchase of 50 calves for fattening would remain attractive even if costs increase or benefits decrease. This investment would require a more careful analysis of risks associated with volumes and costs of animal feed. The analysis also showed that milk collection as a stand-alone operation does not generate sufficient IRR, though it would cover its operational cost. Thus, it is important that this activity is closely linked to processing and requires grant financing.

49. The indicative models both at farm and enterprises show a positive impact on employment. Hired labour details for each of the models are described below. Favourable cash flows from the possible programme financed investments indicated that the improvements in incomes at the farm/enterprise levels would be sufficient to ensure uptake of the proposed activities. Also, a beneficiary's contribution is likely to translate into a high degree of economic attractiveness. Detailed business proposals would be required for each value chain investment.

Table 12: Farm/Enterprise Models - Estimated Costs and Annual Net Benefit

Farm Models	Estimated Investment Costs (US\$)			Annual Net Benefits at Full Development (US\$)			Incremental annual net benefits per 1US\$ of investment (US\$)	IRR (%)	NPV (US\$)	Return to family labour, US\$/day
	Loan	Beneficiary Contribution	Total	Without Project	With Project -Full Development	Incremental				
Dairy Farmer 1 (2 cows)	0	335	335	270	746	476	1.42	42%	1,073	4
Dairy Farmer 2 (5 cows)	704	176	880	176	1,265	1,088	1.24	25%	1,730	5
Dairy Farmer 3 (30 to 50 cows)	13,449	3,362	16,812	267	20,124	19,857	1.18	57%	66,414	59
Meat Farmer 1 (2 cattle heads)	0.0	232	232	0	85	85	0.37	57%	357	
Meat Farmer 2 (4 cattle heads)	0.0	464	464	0	107	107	0.23	27%	291	
Meat Farmer 3 (50 cattle heads)	2,898.6	2,899	5,797	0	1,477	1,477	0.25	31%	4,541	
Milk Collection/Processing	259,000	111,000	370,000	59,227	228,911	169,684	0.46	52%	686,996	
Meat Processing	73,494.6	48,996	122,491	0	25,106	25,106	0.20	17%	40,555	

Table 13: Farm/Enterprise Models - Financial Results, Ratios and Switching Values

Models	Switching Values %, after loan repayments *			
	Incremental Revenues	Incremental Production Costs	Incremental Investment Costs	Incremental Outflows
Dairy Farmer 1 (2 cows)	-23%	28%	446%	28%
Dairy Farmer 2 (5 cows)	-16%	18%	218%	17%
Dairy Farmer 3 (30 to 50 cows)	-25%	34%	433%	31%
Meat Farmer 1 (2 cattle heads)	-7%	7%	266%	7%
Meat Farmer 2 (4 cattle heads)	-4%	4%	168%	4%
Meat Farmer 3 (50 cattle heads)	-3%	3%	129%	3%
Milk Collection/Processing	-29%	44%	166%	29%
Meat Processing	-15%	16%	59%	14%

* The switching values show percentage by which the costs would need to rise or benefits decrease before the NPV reached zero, associated with each of the values (at 8% opportunity costs)

VI. Value Chain Models

50. **Dairy Value Chain Model** describes the interrelationships between the milk producers and a dairy processor in the dairy value chain. It is assumed that improved linkages to the processor (mobilization, mentoring, capacity building and aggregation opportunities provided by the Project) and premium prices for better and reliable supply of milk enable the primary producers to purchase high breeds (or improve herd composition with AI) and improved inputs thus leading to a rise in milk productivity production for satisfying the demand by the processing facility. Milk collection is considered as a part of the business of dairy processor. Practice has shown that the milk collection is not financially viable, unless it is owned and driven by a dairy processor. An MCCC model also confirms this hypothesis.

51. The model demonstrates cooperation between the farmers who decided to increase milk productivity and improve their dairy herds and milk quality/safety and the dairy processing enterprise, which is investing in expansion of its facility, milk collection and increasing its production.

52. Milk Processing. The total investment of the facility would be around KGS27.5 million or US\$398,550, including in a Milk Collection and Cooling Center (MCCC) – around KGS2.2 million or US\$31,885. This would allow the enterprise to annually process 1 200 tons of milk (from 500 tons WOP) into 87 tons of hard cheese and 14 tons of butter versus to the WOP 36 tons of hard cheese and 6 tons of butter. The investment would be financed through own contribution of KGS 5.1 million (US\$74,000) and a long-term loan of around KGS17.8 million (US\$257,971) in Y1 as well as the provision of technical advice. Additional financing requirements include a short-term lending (KGS2.5 million in Y1 and KGS3.7 million from Y3 onwards) for six months to maintain the operations between producing-to-stock and sales. The investment would lead to incremental annual net benefits derived from sales of dairy products of a required quality reaching KGS 11.7 million at full development (about US\$169,684 in Y3).

53. Milk Collection. Dairy processors in the Project area are interested in stable supply of raw milk and are currently operating below capacity; however, dairy farmers (especially rural households) produce relatively small volumes of milk and often of inconsistent quality. Yet, farmers have limited opportunities to market their dairy products profitably. Giving an incentive to the dairy processors to invest in milk collection and cooling chains to collect bulk quantities of raw milk could be a solution. By participating in the Project's training programmes, local livestock producers would be able to ensure that animals are healthy and can provide quality milk to the standards required by the processors. It is envisaged that MCCCs would be integral parts of the dairy processors' business to overcome the issue of financial sustainability and to ensure formal contractual arrangements with the dairy farmers in a long term.

54. Milk Production. The viability of the above investments would depend on the assurance of a stable production of quality and safe milk by the farmers. It is assumed that 150 small dairy farms (and rural households) with about 2 cows each would invest in improved AI breeding (local breed) and improved husbandry in order to increase milk productivity. About 30 middle-size dairy farms with 5 cows each would invest in improved AI breeding and improved husbandry in order to increase milk productivity. Three large farms (so called "business farmers") would increase their herds from 30 to 50 cows (purchasing 20 pure breed cows), improve their husbandry practice and increase milk productivity in order to increase their overall milk production by almost three times. It is expected that all project farms would produce milk of better quality and they would receive a premium price for the supplied milk paid by the dairy processors. They would collectively produce about 1 200 tons of quality milk per year, equivalent to about KGS19.2 million.

55. With respect to the small and middle-size dairy farms' investment, it is assumed that the farms would use their own resources to finance improved breeding (AI), construction/renovation of a shed, quality feed and veterinary services. This would allow increasing milk productivity for a small farm

from current 6 l/day to 10 l/day and for a middle-size farm from current 6.5 l/day to 10 l/day and significantly increase production of milk available for sale.

56. A large farm (“business farmer”) would attract a long-term loan of KGS 1.0 million (US\$13,550) to construct a shed and to purchase 20 high breed cows, quality feed and veterinary services. This would allow increasing milk production from 75.5 tons to 205.5 tons per year. This investment would result in incremental annual net benefits of around KGS 1.0-1.4 million (US\$14,492-20,290). The value chain model shows NPV of US\$2.0 million and IRR of 51%. In addition, the investment would lead to the creation of about additional 6 full-time jobs at the enterprise and 5,931 person-days of hired labour at farm level (or 23 persons). Table 14 summarizes the expected results for this model.

57. **Meat Value Chain Model** describes the interrelationships between the meat producers and meat processor in the meat value chain. It is assumed that improved access to finance enable the primary producers to purchase animals and improved inputs thus leading to a rise in meat production for satisfying the demand by the processing facility.

58. This model demonstrates cooperation between the farmers who decided to get engaged in beef fattening and the meat processing enterprise, which is investing into the establishment of the facility.

59. Meat Processing (slaughter house). The total investment of the facility would be around KGS8.4 million or US\$122,490. This would allow the enterprise to annually process 2,400 heads of cattle (or 8 heads of cattle per day). The investment would be financed through own contribution of KGS1.7 million (US\$24,500) and a long-term loan of around KGS5.0 million (US\$72,000) in Y1 as well as the provision of technical advice. The investment would lead to incremental annual net benefits derived from sales of slaughter services reaching KGS1.7 million at full development (about US\$25,100 in Y3).

60. Meat Production (cattle/beef). It is assumed that 300 and 400 small cattle farms (and rural households) would invest in fattening of 2 and 4 cattle heads each respectively. Five large cattle farms would establish feeding lots for fattening of 50 cattle heads each. They would collectively produce 2,450 heads of fatten cattle per year or 900 tons of beef, equivalent to about KGS90.0 million or US\$1.3 million.

61. With respect to the small cattle farms’ investment, the models suggest that the farms would not require additional credit resources. They would finance from their own resources the fattening of cattle, construction of a basic shed, quality feed and veterinary services. This would allow producing between 0.7 tons and 1.5 tons of meat (in life weight) for sale per year by these farms.

62. A large cattle farm (a feeding lot) would attract a long-term loan of KGS 200,000 (US\$2,900) to construct a shed and to purchase 50 young cattle, quality feed and veterinary services. This would allow producing 18.5 tons of meat (in life weight) per year. This investment would result in incremental annual net benefits of around KGS 101,900 (US\$1,477).

63. The meat value chain model shows NPV of US\$0.5 million and IRR of 28%. In addition, the investment would lead to the creation of about additional 8 full-time jobs at the enterprise and 9,600 person-days of hired labour at farm level (or 36 persons).

64. **Summary of Value Chain Analyses**. This analysis demonstrates the type of procedure that would be used by the Project implementation unit in assessing the potential of proposed investments, both from a poverty alleviation point of view as well as economic potential. The main indicators of the value chain analysis are summarised in Table 14.

Table 14: Summary of Value Chain Models

Indicator	Dairy	Meat
Total Number of Direct Beneficiaries	249	749
of whom:		
- Farmers	203	705
- On-farm hired labour	34	36
- Labourers	12	8
Total Incremental Investments (000'US\$)	498	407
of which:		
- Beneficiary contribution/loan	100	319
Incremental Annual Benefits at Full Development (000'US\$)		
- Total	309	84
- Farmers	140	59
VCM NPV (000'US\$)	2,007	476
VCM IRR	51%	28%
Annual Incremental Net Benefits per US\$ Investment (US\$) at Full Development	0.62	0.21

VII. Benefits of the Upgraded Livestock Sanitary System

65. The Project's Component 3 will be aiming on upgrading the Livestock Sanitary System of Kyrgyzstan through implementation of the three activities: i) institutional capacity building of the SIVPSS; ii) capacity building in the private veterinary practice system; and iii) assistance to the supporting state institutions. At least the following benefits could be expected from these activities: (i) revival and increase of export of livestock commodities due to better compliance with the biosecurity and food safety legislation and standards of major trade partners (first of all those of the EAEU) and (ii) avoided costs of zoonotic diseases (PPR and others) due to vaccination programme and improved animal sanitary system in general.

66. **Increase and revival of export of livestock commodities.** With the accession of the Kyrgyz Republic to the EAEU⁷⁸, the country's agriculture sector is facing new challenges but also new opportunities. The EAEU, among other countries, also includes Russia and Kazakhstan, which are Kyrgyzstan's main export markets. However, since 2012 a dairy export ban to Kazakhstan has been in force, limiting the number of dairy exporters to ten. Dairy represents 80 percent of the total livestock exports (GTA, year 2014).

67. The concern, therefore, persists that even though the membership to the EAEU presents new market opportunities, the Kyrgyz agribusinesses operating in food industry, livestock producers and processors in particular, may be unable to capitalize on them due to their inability to meet the animal health, food safety and quality standards of the Union. It reduces their competitiveness in the EAEU and puts them at risk of not being able to sell their products. However, on the opportunity side the Kyrgyz dairy and meat are believed to be of better taste and quality due to the production model under which most or significant share of animal feed comes from natural pastures. Any intervention tackling Kyrgyzstan's compliance with the biosecurity and food safety legislation and standards would be very timely, as it would allow the Kyrgyz livestock sector to capitalize on the new market opportunities, as well as on the achievements and initiatives of the previous and ongoing projects in the agriculture sector.

⁷⁸ Kyrgyz Republic became a full member of the EEU in May 2015.

Table 15: The Kyrgyz exports of livestock products

Commodity chapter	Parameter	2010	2011	2012	2013	2014	2015
HS01, Live Animals	Value, M USD	0,58	0,20	0,07	0,02	0,02	0,01
	Volumes, MT	4.560	6.783	414.088	456.016	2.247	1.400
HS02, Meat & Edible Offal	Value, M USD	6,13	0,96	-	0,06	0,16	0,07
	Volumes, MT	818	102	0	13	109	20
HS04, Dairy, Eggs, Honey	Value, M USD	33,16	25,89	30,99	16,61	24,17	12,79
	Volumes, MT	34.343	24.419	37.476	14.461	23.755	14.043
HS05, Products of Animal Origin	Value, M USD	1,31	2,78	1,63	4,64	5,13	2,59
	Volumes, MT	1.851	523	46	475	214	976
Total livestock products	Value, M USD	41,18	29,82	32,69	21,33	29,41	15,46
	Volumes, MT	41.572	31.827	451.610	470.965	26.325	16.439

Source: GTA, April 2016

68. The demand for Kyrgyz dairy and meat products, in particular, in Kazakhstan, is significant. Even though the border is closed to most of the official dairy and meat exports (only 10 companies can export such products to Kazakhstan), the informal trade is booming. Russia is also considered a potentially large export market for dairy products (such as cheeses). Once the product quality is upgraded, exporting to other countries (such as China and South Korea) should be possible too. In successful years, the Kyrgyz exports of livestock products would surpass 30 and even 40 million US Dollars (see Table 15 above). According to some experts, overcoming current compliance barrier would allow for at least 26 thousand additional tonnes of livestock products worth some USD 25 million.

69. A cautious assumption was made projecting a potential growth of the Kyrgyz livestock export due to the improved livestock sanitary system supported by the Project. It is estimated that the export would gradually increase starting from 1% on the second year of the Project implementation reaching 10% on the fifth year amounting to about US\$1.7 million of additional export of livestock products. It is also estimated that potentially this increase could reach US\$2.7 million and US\$7.1 million on tenth year and twentieth year of the analysed period respectively.

70. **PPR vaccination benefits.** The Project will support capacity building for strengthening 11 key critical competencies which would allow the SIVPSS to move from Stage 1 to Stage 2 of the FAO-OIE Global Strategy for Control and Eradication of Peste des Petits Ruminants (PPR). Particular focus will be on establishing an active disease surveillance system. In addition to investments in the key critical competencies, the Project will procure PPR vaccines during Stage 2 and will have the option of purchasing other vaccines should an infectious disease outbreak occur. An outbreak of a notifiable animal disease such as foot and mouth disease, PPR or sheep/goat pox is a high risk for the Project as trading partners would immediately ban trade of livestock products until the disease was sufficiently controlled. Therefore the procured vaccines will serve a dual purpose, to moderate Project risks in case of a disease outbreak and to initiate control of PPR disease in line with the FAO-OIE Global Strategy for Control and Eradication of PPR.

71. PPR is an important cause of mortality and production loss among sheep and goats in the developing countries. Despite control efforts in a number of countries, it has continued to spread across Africa and Asia, placing an increasing burden on the livelihoods of livestock keepers and on veterinary resources in affected countries. PPR disease is characterised by fever, ocular and nasal discharges, oral erosions, bronchopneumonia and diarrhoea. The severity of clinical signs, the morbidity rate, and the case fatality rate can vary depending on the virulence of the virus strain, the species and breed of the host, concurrent infection, and previous exposure of the population to PPR virus.

72. In the analysis, the benefits of the PPR eradication were determined from (i) the averted mortality costs, (ii) the avoided PPR control costs after the eradication. An economic impact associated with PPR mortality of sheep and goats in Kyrgyzstan was estimated based on the projection of population of sheep and goats over a 20-year period and the annual mortality rate of

2.6% (worldwide averaged PPR mortality rate). In the first few years of the Project it is assumed that there will be only a slight reduction in PPR mortality and therefore initially there will be no avoided losses due to PPR mortality, but once targeted vaccination starts to be implemented there will be a progressive reduction in annual PPR mortality and the avoided losses due to PPR mortality will increase each year until PPR disease no longer occurs. The full PPR eradication is expected on Y10 year after the project start. The annual averted mortality cost was estimated at US\$232,055 in Y1, gradually decreasing up to US\$21,653 before the full eradication.

73. An estimation of the avoided costs associated with the PPR vaccination program was also made. It was based on the costs of the PPR vaccination programs conducted in the countries similar to Kyrgyzstan in terms of number of small ruminants. The avoided costs were also projected over a 20-year period and it was estimated that in total it would be US\$6.9 million.

74. The results of the benefit-cost analysis suggest strong economic returns from PPR eradication, both from the averted PPR mortality costs and the avoided PPR control costs after the eradication.

VIII. Economic Analysis

75. The ATMP does not lend itself to the traditional economic analysis of development projects, i.e. to aggregate benefits from specific households taking up pre-defined packages of interventions as compared to project costs. In the presented case, the representative value chain models could be used to estimate potential returns to US\$1 of economic investments. The potential range of opportunities for economic advancement in the country is greatly varied throughout the area, and it is anticipated that farmers and rural entrepreneurs would encourage diversity in order to accelerate economic advancement. The project would support farmers and entrepreneurs to identify those opportunities, thus generating investments beyond those included in project costs.

76. Considering the dairy and meat value chain models as representative, it is estimated that in terms of hardware investments (credit and grants) the Project would reach around 35,600 direct beneficiaries⁷⁹, including at around 32,000 farmers and 3,600 labourers and on-farm workers (Project Logframe indicates achieving 80% of these numbers given an 80% success factor). About two-third of the overall incremental benefits would flow to the smallholder farmers, and the share of their marketed produce would grow by at least 30%. Thanks to the improved breeding and feeding activities, milk yields would grow by at least 25%. It is also estimated that after completion the project investment in the livestock value chains development would annually generate around US\$465 thousand of additional income into the government budget in terms of incremental taxes.

77. The shadow exchange rate (SER) has been calculated at 1 USD = 71.8 KGS. Overall conversion factors for inputs and outputs vary between 0.81 and 0.93. An average conversion factor of 0.9 has been applied when converting financial prices into economic prices. A conversion factor of 1.0 has been estimated for the main outputs -milk and meat. Import for these commodities constitutes only a fraction in the total production, around 4% in value terms. Moreover, the Kyrgyz economy is relatively open and not distorted by subsidies or tariffs. Calculation of the economic prices of these two commodities has confirmed this assumption. The derivation and a summary of economic prices are presented in Table 1 of WP5.

78. **Opportunity Cost of Labour.** A daily wage rate of KGS 506 has been assumed for hired and family labour in Economic Analysis by adjusting the financial cost of labour of KGS 550 (as a prevailing labourer rate during the off-season) by 92%, which is justified given the rural unemployment rate at 8%.

79. **Benefit Stream.** The analysis attempts to identify quantifiable benefits that relate directly to the activities undertaken following implementation of the components, or that can be attributed to the project's implementation.

⁷⁹ More conservative assumptions have been made for the Project outcomes allowing for some failures (20%). See PLF for details.

80. The illustrative models described above have been used for the calculation of the overall benefit stream of the value chain support, on the basis of economic prices.

81. In calculating the overall benefits from the models, the following was taken into account:

- Considering the above examples as reasonable assumptions of the VCs likely to be implemented, an estimated average incremental annual net benefit per US\$1 of investments is used.
- In particular, a weighted average indicator for the incremental annual net benefits per US\$1 of investments equals to US\$0.48.
- The incremental net benefits were calculated by multiplying this indicator with the amount of estimated investments to value chains development, but considering the gradual increase of such benefits over the period of nine years (in line with the patterns of VC models).
- An 80% success rate was applied to the models, i.e. it is assumed that only 80% of the investments would achieve the estimated returns.
- The benefits of the VCs are calculated for the period of twenty years.
- No financing flows have been undertaken in the calculations as they are either already reflected in the Project costs (the ATMP financing and beneficiary's contribution for the investment costs) or represent transfer payments (taxes).

82. **Cost Stream.** The incremental costs in economic prices have been calculated by the removal of price contingencies and taxes/duties. There are no recurrent and replacement costs after the ATMP completion. O&M costs have been counted in the calculation of the net incremental benefits of the value chain models. The total economic cost of the project amounts to about US\$ 53.5 million.

Results of the Analysis

83. **Overall Estimated Return of the Proposed Project.** The period of analysis is 20 years to account for the phasing and gestation period of the proposed interventions. Given the above benefit and cost streams, the base case economic rate of return (ERR) is estimated at 19.4%. The base case net present value of the project's net benefit stream, discounted at 8%, is US\$45.0 million in economic terms. The summary of economic analysis is presented in Table 17.

84. **Sensitivity Analysis.** Sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits. The results are presented below. A fall in total project benefits by 20% and an increase in total project costs by the same proportion would reduce the base ERR to about 13%.

85. The switching value for total project benefits is about 56%; while for Project costs it is approximately 106%. A one-year delay in programme benefits reduces the ERR to 16%. With a two-year delay in project benefits, the ERR falls to approximately 14%.

Table 16: Sensitivity Analysis

Sensitivity Analysis (20-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	-30%	1 year	2 years
ERR	19,4%	18%	16%	12%	21%	23%	17%	15%	13%	16%	14%
NPV (000'US\$)	45 061	40 680	36 300	23 158	53 947	62 834	36 174	27 287	18 401	35 380	26 417

86. **Risk Analysis.** Market risks associated with the Project (described in the section on Risks of the Main Report) may lead to the reduced economic returns. Lack of capacity in implementing agencies and beneficiaries to effectively participate in Project may result in the delay of realization of benefits.

The described above sensitivity analysis allows for the following reservations: the Project would be economically viable even if benefits decreased by 56% or realization of benefits delayed by 2 years.

87. Greenhouse gas emission. It is expected that the Project would be reducing GHG emissions as it promotes the “less animals, better animals” concept, while the technology innovation sub-projects are expected to address environmental issues related to fodder production and manure management for nitrogen cycle control. An EXACT analysis has confirmed that there will be a reduction of CO₂ by 1,835,528 ton per annum translated into incremental economic benefits of US\$7.3 million (@US\$4 per ton). Inclusion of this additional benefit into the economic analysis generates ERR of 27.3% and NPV of US\$87.8 million.

(Constant 2016 values)
 (Constant 2016 values)

Table 17: Economic Analysis – Cost and Benefit Streams (000'US\$)
 (Constant 2016 values)

(US\$ thousand)	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	P12	PY13	PY14	PY15-20
Project Benefits															
Net Benefits of VCs development	0	0	178	952	2 731	5 522	8 667	11 406	12 949	13 672	13 672	13 672	13 672	13 672	13 672
Net Benefits of improved livestock sanitary system	898	672	1 006	1 361	2 279	2 306	1 934	1 877	1 899	1 921	1 921	1 921	1 921	1 921	1 921
Total Project Net Benefits	898	672	1 184	2 312	5 010	7 828	10 601	13 284	14 849	15 593	15 593	15 593	15 593	15 593	15 593
Project Costs															
Investment Costs	3 829	10 591	14 404	13 356	11 372										
Replacement of Goods and Equipment*						0	0	0	1 130	0	0	0	0	0	0
Recurrent Costs*						230	230	230	230	230	230	230	230	230	230
Total Project Costs	3 829	10 591	14 404	13 356	11 372	230	230	230	1 360	230	230	230	230	230	230
Total Project Incremental Net Benefits	-2 932	-9 920	-13 220	-11 044	-6 362	7 598	10 371	13 054	13 489	15 363	15 363	15 363	15 363	15 363	15 363
ERR	19,4%														
NPV @8% (US\$ thousand)	45 061														
* Replacement and recurrent costs are already included in calculation of net benefits from VCs, however there will be replacement of vehicles for SIVPSS															
To cover incremental recurrent SIVPSS costs															
Incremental Net Benefits with CO2 emission	-2 932	-9 920	-13 220	-11 044	-6 362	14 940	17 713	20 396	20 831	22 705	22 705	22 705	22 705	22 705	22 705
ERR	27,3%														
NPV @8% (US\$ thousand)	87 831														

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Attachments: Project Organigramme; other figures, charts and tables

Appendix 12: Compliance with IFAD policies

A. Adherence to IFAD policies

1. The ATMP is closely aligned with IFAD's strategic framework 2016 – 2025, in particular Strategic Objective 2: Increase poor rural people's benefits from market participation, and the associated areas of thematic focus: (i) diversified rural enterprise and employment opportunities, (ii) rural investment environment, and (iii) rural producers' organizations.
2. The project is also aligned with: (a) the new IFAD Policy for Environment and Natural Resource Management, which proposes greater attention to risk and resilience in order to manage environmental and natural resource-related shocks, and promotes livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management; and (b) the IFAD Strategy on Climate Change, which is articulated around three objectives: (i) support the innovative approaches in order to assist the small producer (women and men) to increase their resilience to climate change; (ii) assist these small agriculturists to take advantage of available financing and incentives for mitigation; and (iii) promote a documented and more coherent dialogue on climate change, rural development, agriculture, and food security. Similarly, the design of the ATMP is fully compliant with IFAD's policies on: Targeting, Gender Mainstreaming, Rural Finance, Climate Change, etc., and it is fully aware on the new Social, Environmental and Climate Assessment Procedures, and therefore will seek their compliance in programme implementation at operational and field levels.

B. SECAP Note

1. Major landscape characteristics and Issues (Social, natural resources, and climate)

1.1. Socio-cultural context

3. The Kyrgyz Republic is a landlocked country located in North-eastern Central Asia and spanning a total landmass of 198,500 km². The country is largely mountainous, dominated by the reaches of the Tien Shan and the Pamir ranges. About 94% of Kyrgyzstan is located at more than 1,000 m above sea level, and 40% above 3,000 m. Nearly half of the country's total area – some nine million hectares – is pastureland, which plays a key role in the country's economy, society, and culture.
4. The population of the Kyrgyz Republic is 5.5 million of which 65% live in rural areas and depend predominantly on agriculture and livestock, although remittances and welfare also play an important role as an income supplement. The Kyrgyz, the politically dominant group, make up roughly 55% of the population. Although this proportion is increasing with the steady emigration of other groups, the country remains multi-ethnic in character including Russians, Ukrainians, Uzbeks, Tartars, Turks, Kazakhs, Uigurs, Tajiks, and other smaller groups. All these peoples keep livestock of some kind in addition to their arable farming. The Kyrgyz Republic is a low-income country with a gross national income (GNI) per capita of USD 990 in 2012 (Atlas method). By income level, it ranks as the second lowest in the Europe and Central Asia region after Tajikistan. The UNDP Human Development Index (2011) for the Kyrgyz Republic is 0.615, ranking it in 126th place out of 187 countries. The Kyrgyz Republic is classified as a Food-Deficit Country, as it depends on wheat imports to cover about one-quarter of its consumption requirements.
5. Gender equity is less of an issue in the Kyrgyz Republic than many countries due to the highly gender-egalitarian legacy of the Soviet system. There is however growing evidence suggesting that this legacy is being increasingly challenged by the re-emergence of more traditional values and patriarchal patterns, particularly in rural communities. Female-headed households are particularly vulnerable, due to growing disparities in employment opportunities and wages between women and men. Moreover, women-headed households are increasing in rural areas, due to the rise in migration of men.

6. The livestock sector accounts for about half of agriculture's contribution to the Kyrgyz Republic's GDP, and is one of the strongest components of the rural economy. Livestock products represent a substantial part of the diet, and as much as 20% of total food consumption in Kcal/capita. As in other countries in Central Asia livestock has been a safety net for the poorer segments of the rural population, and smallholders own over 90% of livestock. Since 1995 livestock numbers have been increasing, particularly in recent years. This has increased pressure on pastures and created an imbalance in their utilisation, with under-grazing of distant summer pastures and overgrazing of village/near-by pastures.

7. Future additional agricultural growth and gains in rural incomes will depend greatly on the efficient use of pasture resources. Pasture conditions have deteriorated during the Soviet time with the extremely intensive use of pastures, and then during the recent past, with village and close-in (winter) pastures being severely overused and degraded, while the more remote summer pastures have been underutilized as a result of poor access often caused by deteriorating infrastructure. Average degradation of pastures has reached 49% with more than 70% of winter pasture areas being degraded according to the data of the Kyrgyz Ministry of Agriculture and Melioration. Compounding this, major diseases and parasites are widespread. The health of animals has deteriorated with the reduction in veterinary services from Soviet times and there is now a considerable reduced veterinary service, though there are attempts to strengthen the service, primarily through support for private vets and by building up the capacity of community vets.

8. The Pasture Law that was adopted in January 2009 has been a pivotal piece of legislation for the development of the livestock sector. It reconnected management of rangeland ecosystem - summer, spring/autumn and winter pastures, provided more equitable allocation of pasture rights, provided a mechanism whereby stocking rates can be better aligned with pasture carry capacity and was expected to considerably increase generation of revenues for investment in pastures, as well as tax revenues. Another important facet of recent livestock development has been the implementation of a number of effective livestock development projects. Notably, the nation-wide Agricultural Investment Services Project (AISP), which was co-financed by the World Bank, IFAD and EU, made important improvements both in terms of animal health and pasture development and was instrumental in helping to operationalize the Pasture Law. The Livestock and Market Development Programme - LMDPI in Naryn and Issyk-Kul oblasts, and LMDPII in Batken, Jalalabad, and Osh oblasts- also co-financed by IFAD, have shifted the focus towards the natural resource management aspects of livestock production, making an effort to mainstream climate change adaptation into livestock and pasture management.

1.2. Natural resources and NRM

9. The varied geography and climate of Kyrgyzstan account for its high biodiversity – while the country makes up only 0.13% of world land, it hosts approx. 1% of the world flora and fauna. The predominant vegetation types found in the mountains are desert, semi-desert and steppe on all the lower slopes and foothills and in some of the outlying ranges and major basins (Conservation International, 2011). Patches of riverine woodland survive in a few, low altitude places. At higher altitudes, steppe communities, dominated by various species of grasses and herbs occur, while shrub communities are widespread in the lower steppe zone. Spruce forests, the only coniferous forest type, occur on the moist northern slopes of the Tien Shan, while open juniper or *archa* forest occurs widely between 900 and 2,800 metres above sea level. Subalpine and alpine meadows occur in the western part of the mountains, from 2,000 to 4,000 metres, and above. At the very highest and coldest elevations, there is limited vegetation cover, with cushion plants, snow-patch plants and tundra-like vegetation.

10. According to the National Forest Registry of the Kyrgyz Republic (2003) forests cover approx. 8,700 km², with an additional 3,000 km² of "forest-related lands" (plantations, open and sparse woodlands, nurseries etc.). About 90% of all forests grow at altitudes between 900 and 2500 m above sea level. Main mountain forest tree species include spruce, juniper, and walnut. Riparian forests play an important regulation function along the shores of rivers and lakes. In the last thirty years it is

estimated that forest cover has been reduced by at least 50%. The Kyrgyz Forest Service has stated a long-term objective of increasing forest cover from current 4.6 to 6% by 2025-2030, with a net gain of approx. 290,000 hectares of forest compared to 2003. Almost 1 million ha of forestland are used for grazing livestock.

11. The Kyrgyz Republic possesses 30% of the total water resources of Central Asia, mainly stocked in the rivers, glaciers, and snow massifs. The annual average volume of water totals 2,438 km³ including 50 km³ of surface river runoff, 13 km³ of potential reserves of ground water, 1,745 km³ of lake water and 650 km³ of glaciers. Most of the rivers of the country have a snow-and glacier-type of alimentation, and should the temperatures go up, their flow will increase, which has been observed over the last few years. During the period from 1973 to 2000 the total river flow increased by 6.3% compared to the preceding period, and in the next 20 years a further increase in flow by 10% has been forecasted based on worked-out models. On the longer term, largely due to the rapid melting of glaciers, while the country will likely have enough water for its own needs in the future, it may not be able to meet demand in its role as a critical supplier to the Central Asia region.

12. The pastures of Kyrgyzstan cover almost half of the country, or about 80% of agricultural land. An additional 12% of the country is classified as forestland without forest cover, which means they are largely shrub land utilized as grazing land. Most of the rangelands are located at altitudes between 1,000 and 3,500 m, in intermontane valleys and mountain slopes, with about one-quarter found at elevations greater than 3,500 meters. Pasturelands play a key role in the country's economy, society, and culture. The Pasture Department (PD) within the MoAM has overall responsibilities on pastures. The PD has seven sub-divisions in each oblast.

Table 18: Pasture resources in the Kyrgyz Republic (Fitzherbert 2000)

Type of pasture	Altitude	Squared Km	% Total land area
Summer pastures	2500 to 3500	38,890	19.4%
Spring-Autumn pastures	1500 to 2500	26,970	13.5%
Winter pastures	Various	22,850	11.4%
Total		88,710	44.3%

13. According to FAO (2000), pasture productivity declined steadily since the 1960s and by 1993 was reported to be about 300 kg/ha of dry matter, due to overstocking and poor grazing management. Productivity of the summer pastures declined from 640 kg/ha to 410 kg/ha and the spring and autumn pastures from 470 kg/ha to 270 kg/ha over the thirty years preceding 1993. The productivity of winter pastures decreased even more dramatically from 300 kg/ha to less than 100 kg/ha and encroachment of woody and unpalatable weeds affected about 50,000 km². The same FAO study estimated the maximum carrying capacity of Kyrgyzstan's grazing-land at 7,000,000 sheep equivalents (accepted ratio: one horse = 6 sheep: one cow or yak = 5 sheep; one goat = 0.7 sheep).

14. In 2012, the livestock industry accounted for 5.44 million sheep and goats, 1.4 million cattle (including yaks), 0.4 million horses and 5 million chickens. Small-scale farmers own more than 90 percent of the livestock. Since 1995 livestock numbers have been increasing, particularly in recent years. From 2003-2009 the number of cattle, horses, sheep and goats increased by 27 per cent, 10 per cent and 31 per cent respectively.

Table 19: Recent changes in the livestock population in Kyrgyzstan (FAOStats, 2011)

Heads (K)	1992	2009	% Change
Cattle	1190	1224	+13%
Sheep	9225	3606	-256%
Goats	300	897	+290%

15. According to the FAO/WFP Crop and Security Assessment in 2010, livestock rearing systems for sheep and goats, and for a major proportion of the cattle, include seasonal transhumance to intermediate and high-mountain pastures (*jailoo*). The migration begins in April/May and finishes in September/October.

1.3. Climate

16. The climate of Kyrgyzstan is continental with hot summers and cold winters, although conditions vary widely - from a low dry continental climate in the mountain slopes to a "polar" climate in the highly elevated areas of the Tien Shan and Pamir ranges. The Fergana Valley in the southwest experiences extremely hot summers temperatures that may peak as high as the low 40s°C and relatively mild winters, while the coldest areas of the country experience below-freezing temperatures for as long as 40 days and heavy snowfall. The average annual precipitation is 533 mm, varying from 150 mm in the plains to over 1,000 mm in the mountains. Most precipitations occur in the winter season, mainly between October and April. Snowfall constitutes an important part of the total precipitation. About 10% of Kyrgyzstan, situated at the lowest altitude, is classed as arid. The wettest areas are found in the mountains above the Fergana Valley, while the driest, on the southwest shore of Lake Issyk-Kul. March to May and October to November are usually the wettest months.

1.4. Key Issues

17. The interaction between anthropogenic maladaptive practices (e.g. overgrazing, lack of seasonal rotation and restoration of degraded soils) and climate change (namely the higher frequency and intensity of drought and climate-related extreme events) has contributed to the degradation of pastures and rangelands. The ability of livestock farmers to maximize the use of their pastures is constrained by many problems, including the lack of technical knowledge of small livestock holders, poor governance and inefficient pasture management, pasture degradation, and lack of access to assets and infrastructure - all of this further exacerbated by climate change.

A) Poor governance and inefficient pasture management

18. One of the major factors of the livestock sector's poor performance in Kyrgyzstan is weak institutions at the national level responsible for ensuring policy and the regulatory framework, producing and transferring required knowledge, and providing technical support to livestock producers. In addition, the lack of institutions at the local level to mobilize farmers to jointly govern communal resources and protect their rights leads to low productivity of the sector, and high incidence of poverty in mountainous livestock communities. Due to lack of knowledge on management of grassland-based livestock in country, in the newly born Kyrgyz Republic it was difficult to develop and introduce a concept and mechanisms for community based pasture management. Only in 2011 the Guidelines for pasture management plan development and implementation were developed, however, many Pasture Committee members still do not understand the value of the pasture management plan and its elements of planning to allocate grazing rights, collect fees and undertake pasture infrastructure improvements. Allocation of grazing rights is not based on stocking rates of particular plots, but reflects grazing routes that have been used by farmers and shepherds before. According to the data of the Pasture Department, in 2011 all PUUs had some sort of pasture management plan, with only 20% of them developed based on guidelines, 50% of average quality, and the rest 30% were poorly developed plans. No reviewed plans included measures on management of grazing for pasture improvements, such as rotational grazing, ceasing grazing and prohibition of grazing in a planned and specific way.

19. Investments in the livestock sector since the country's independence have triggered fundamental changes in the structure of livestock production and marketing, a shift from inefficient state operations to the growing private sector. The 2009 Pasture Law has simplified and strengthened the management and administration of Kyrgyz pastures and has provided a foundation for implementation of a new generation of projects, such as the LMDPI and LMDPII, which provide a crucial opportunity to finalize such management transfer in the livestock sector, especially in regards to pasture management, climate change adaptation and the provision of animal health services.

These two operations following AISP and supplemented by the upcoming World Bank-funded PMIP investment would ensure the sustainability of achieved results and advance the sector's performance to increase economic growth and alleviate poverty.

B) Pasture degradation:

20. Livestock in Kyrgyzstan was traditionally grassland based, but owing to mobility restrictions during the Soviet period it had become heavily relied on imported feed grain for winter months. With the post-Soviet transition to private farming, livestock rapidly reverted to being grassland dependent. Pasturelands face both area and productivity reduction (degradation). According to Giprozem (State Land Management Institute), about 35% of all pasture lands has been degraded with most severe degradation of the winter or near settlement pastures reaching 70% in most locations. In general, pastures near settlements have been over-utilized, while some summer pastures have been under-utilized, leading to species degeneration in some pastures and degeneration of some winter pasture beyond a critical point beyond which recovery requires long resting periods or reseeded in others. Several factors are responsible for pasture degradation. The most significant ones are the increasing number of livestock, ineffective management of the resource by central and regional government which led to de facto 'open access' unplanned grazing, and lack of skills on planning and management of livestock production among farmers. Pasture resources play a crucial role in life of about 66% of population living in rural mountainous areas that depend on livestock as a major source of livelihood. These communities also make the poorest segments of rural population in Kyrgyzstan.

C) Lack of access to assets and infrastructure:

21. The latest interventions in support to the livestock sector, including the LMDP projects, are trying to upscale and upgrade the investments needed for the CPMPs to improve the lack of access to assets and infrastructure that hinder the development of the sector. These include: rehabilitation packages for degraded areas (fencing, demarcation, weed/shrub control, supplementary seeding, etc.); water management measures to increase water retention and regulation and to improve water balance and decrease the threat of drought (fences for shade, measures to retain water in soil, drainage, riverine and water spring restoration, protection and shade through reforestation in water points); measures to prevent soil erosion, mudslides and floods; protection against storms and winds; infrastructure to access/use remote pastures (road improvement, connectivity bridges, stock watering points, etc.); infrastructure to enhance the value of spring/autumn pastures, including the construction of livestock shelters and upgrading of facilities for herders; restoration of degraded pastures and improvement of vegetation cover/pasture yield/hectare with highly diverse native plant species/genetic varieties, tolerant to climate constraints (e.g. summer drought); agricultural machinery to produce/harvest/store fodder (grass cutters, hay making machines, silage choppers, etc.); support for fodder production (leguminous plant seeds, barley and corn seeds, etc.).

22. The fragmentation of responsibility between oblast administrations responsible for remote or summer pastures, rayon administrations responsible for intensive or spring/autumn pastures, and the local self-government bodies (LSGB) in each Aiyl Okrug (AO) or sub-district responsible for near village or winter pastures, has favoured bad practices such as the disruption of seasonal grazing routes, a lack of transparency in pasture allocation, and inequitable access and insufficient investment in infrastructure to maintain access to pastures. In general, pastures near settlements have been over-utilized, while many summer pastures have been under-utilized. This unbalance has led to species degeneration in some pastures and to the degradation of some winter pasture beyond a critical point when recovery requires long resting periods or reseeded..

23. In order to produce a sufficient quantity of feed and forage for winter supplementation, smallholder farmers need to cultivate increased quantities of barley (*Hordeum vulgare*), lucerne (*Medicago sativa* spp.) and sainfoin (*Onobrychis viciifolia*). The access to quality seeds and inputs remains a constraint for smallholder farmers in the Project oblasts, particularly in the more remote areas. Government initiatives and several projects (e.g. ASSP, AISP, UNDP project "Demonstrating Sustainable Mountain Pasture Management in the Suusamy Valley") have promoted cost-effective and sustainable models for community fodder seed programs to make them available to members of

PUUs, using a farmer-to-farmer distribution system, such as that employed under the community seed funds that have been set up in PC areas around the country.

D) Climate change:

24. Central Asia is a region assumed to become severely adversely affected by climate change, with more frequent droughts, heightened extreme weather conditions and melting glaciers.

25. The Kyrgyz Republic issued the Second National Communication (SNC) to UNFCCC in 2009, using Global Climatic Models covering the period till 2100. Although the low Global Climate Models (GCM) resolution is a major issue in the forecast of climate change and its impact due to the complex relief and geography of Kyrgyzstan and its sharp altitude gradients, the SNC acknowledges that the country will be increasingly and strongly affected by climate change, and draws a set of conclusions on the evolution of climate in Kyrgyzstan. Research conducted during the preparation of the SNC show that over the last century the air temperature of the territory of the country increased by 0,8°C. The GCM used by IPCC indicate that Central Asia is expected to experience an increase in mean annual temperature on average of 2°C by 2020 and 4/5°C by 2100. When it comes to precipitation, estimates foresee local increase and decrease in the different parts of the country on the short term, with general, sharp decrease after 2030-2040. Overall, an increase in winter precipitation and a decrease in summer precipitation are projected for Central Asia. The model also predicts a decrease in annual runoff of 12% by 2020, with a potential three-fold increase by 2050.

26. A more recent analysis of future climate conditions in Kyrgyzstan conducted by FIC/IEH (2013) for the formulation of the Livestock and Market Development Programme II (LMDP II)⁸⁰, provided the following results:

- (i) Changes in temperature: Maximum temperatures are expected to suffer a clear increase throughout this century. By mid century, under RCP45 increases would reach between 2°C (in the east) and 2,8°C (in the north). Under RCP85, temperature would rise between 2,6°C (east) and 3,8°C (north). Minimum temperature is also expected to increase, although less than maximum temperature (between 0,5° and 1°C less). Regarding seasonal changes, the results of the intermediate RCP45 show that increases could be between 2°C (east) and 3°C (north) in winter and autumn; between 2°C (Fergana valley) and 2.7°C (west and north) in summer, and between 1.7°C (east) and 2.6°C (north) in spring.
- (ii) Projections about precipitation should be viewed with caution due to poorer verification and validation results. By mid-century, the increase in accumulated rainfall could be between 12% (west) and 18% (northeast) under RCP45, and between 20% (west) and 28% (north) under RCP85, with no significant changes in the summer season.

27. The SNC to UNFCCC also provides an assessment of the most vulnerable areas to climate change:

- Water. The combination of decreased rainfall and the significant reduction of glaciers will have a negative impact on water availability and river-flow, with changes in intra-annual distribution. The depletion of water resources might lead to an increase of arid and semi-arid desert areas from current 15% to 23-49% in 2100. This entails the danger of future, greater shortages and potential disputes over water resources in Central Asia, which might have a serious impact on the regional geopolitical balance.

⁸⁰ The description of future climate conditions is based on the generation of climate change scenarios. In this case, the scenarios are generated based on future projections for temperature and precipitation. The methodology used to produce future climate scenarios followed these phases: i) model selection¹; ii) gathering historical observations from available monitoring stations; iii) adaptation and application of a statistical downscaling methodology (FICLIMA)²; iv) verification process³; v) validation process⁴; vi) generation of future scenarios. Six Climate Models –CM-, internationally recognized and used by the IPCC in its Fifth Assessment Report, were applied. The different ways that humanity may develop in the future regarding greenhouse gas concentration trajectories were represented by Representative Concentration Pathways, RCPs, also used in the forthcoming IPCC5. Downscaling methodologies adapted the low resolution information to project local-scale surface effects (rainfall, temperature), used to generate local climate scenarios required to develop local adaptation strategies. The downscaling methodology named 'FICLIMA' (developed by FIC) was adapted to Kyrgyzstan climate conditions and then applied to produce local scenarios.

- Agriculture and Livestock. Temperature changes will extend the areas favourable to certain crops, such as cotton and grapes and will require overall shifts in the actual distribution of crops. Major events that threaten to reduce agriculture productivity include extended summer drought, hailstorms, windstorms, late spring and early fall frosts, and winter thaws. Decreased summer precipitation may significantly reduce the productivity of highland pastures in several parts of the country.
- Extreme climate events. The overall probability of landslides, mudflows, avalanches, high waters and breaches of high-mountain lakes will locally increase or decrease in different parts of the country, with a sharper increase in the central part of the country.

28. The geography and topography of Kyrgyzstan make it one of the most hazard-prone countries in Central Asia. Hazards such as drought, land and mudslides, avalanches, squalls, downpours, icing, frosts, breakthrough of glacial lakes, floods, river erosion and earthquakes are all common occurrences in Kyrgyzstan. The vast majority of the population lives in the valleys and foothills of the mountains, where vulnerability to these processes is particularly high. On average, destruction and loss from natural disasters totals up to US\$ 30-35 million per year⁸¹. Limited state and local government resources available for disaster reduction and response exacerbate the population's high vulnerability to natural disasters.

29. The SNC has identified the following priority climate change adaptation actions related to agriculture, water and the consequences of extreme weather events:

- Diversification of livestock and crops to better incorporate breeds/varieties tolerant to expected climate change, including hybrids, with enhanced endurance and suitability to temperature, humidity and other varying agro-climatic conditions;
- Implementation of alternative cultivation approaches, including change of land topography and timing of planting;
- Implementation of efficient irrigation practices, and development of innovative studies in the field of irrigation to solve the problem of a projected increase in the moisture deficit and the frequency of drought periods;
- Crop insurance and investment in agricultural equities; diversification of farmers' income sources to reduce the risk of income loss caused by climate change;
- Development and implementation of modern systems of early notification and prevention of natural disasters and temperature anomalies; provision of daily and seasonal weather forecasts;
- Development of incentive programs for farmers and agricultural grants to finance actions such as enhanced equipment and the availability of fertilizers for peasants and farms; and
- Engineering actions and climate-proof infrastructures aimed at the elimination and prevention of climate hazards;
- Spatial planning of all emergency situations including identification of danger zones;
- Development and implementation of state policy and programs to regulate water and land use in view of varying climate conditions.

30. The SNC outlines its overall priorities for adaptation actions as follows:

- Improvement of legislation, beginning with the development of a national adaptation strategy to climate change that includes sectorial development plans;
- Improvement of institutional structure (creation of permanent structures and strengthening of communications between individual departments);
- Increase of knowledge;
- Economic incentives of adaptation actions.

⁸¹ GFDRR Disaster Risk Management Programmes for Priority Countries, Kyrgyz Republic case study.

31. The main ministerial bodies engaged in climate change, environment protection, sustainable management of resources are the Ministry of Industry and Energy, Ministry of Economic Development, Ministry of Agriculture and Water Management, Ministry of Natural Resources. The country created an Inter-Agency Group tasked with the development of a National Strategy and Climate Change Adaptation Plan, which was released in the second half of 2015. In 2005, the National Committee on Climate Change Consequences (NCCC) was established, with the objective to coordinate the national activities for the execution of the Republic's obligations under UNFCCC and the Kyoto Protocol.

2. Potential project's social, environmental, and climate change impacts and risks

2.1. Key potential impacts

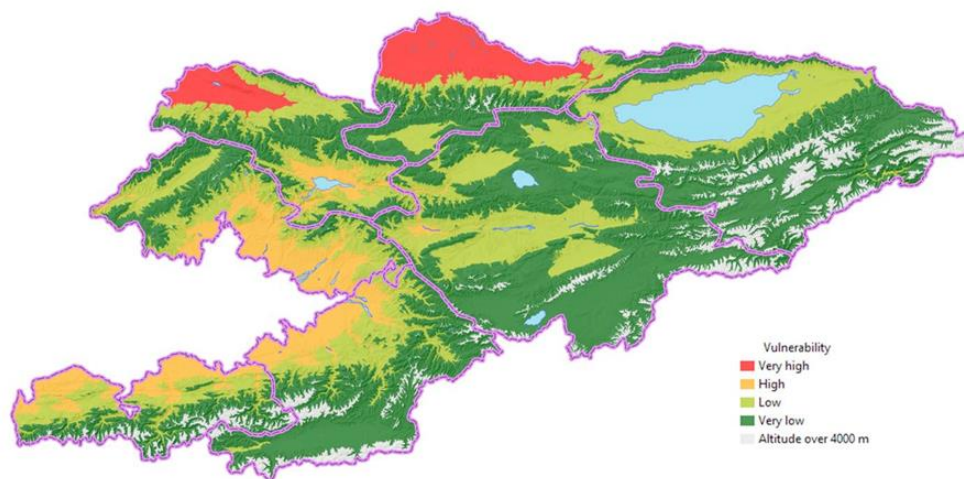
32. The project should not generate negative social, environmental, and climate change impacts, provided it builds on, and fully integrates the sustainability aspects that are embedded in the on-going LMDP programme initiatives that IFAD is implementing in the Kyrgyz Republic. At this stage of the project design process, when the development of the full proposal has not yet taken place, it is important that the project design team takes into consideration the sustainability measures embedded in the previous IFAD initiatives in the country, namely LMDPII. It is understood that ATMP intends to have a nation-wide scope and will focus on the livestock marketing and processing part of the value chain. It is nevertheless important that ATMP incorporates the sustainability elements that stand at the core of the LMDPII project, namely: (i) the climate change adaptation measures; (ii) the restoration of ecologically sensitive pastureland, and (iii) the special consideration of women, youth and marginalized groups in the economic diversification and income generation activities to increase the resilience of the rural economy. This integration is especially important as the LMDPII project only works in three of the seven oblasts of Kyrgyzstan – namely Jalal-Abad, Osh, and Batken - while ATMP has a national scope, thus is in a ideal position to disseminate the best practices and lessons learned through LMDPII on climate resilience and environmental sustainability to the rest of the country.

2.2. Climate change and adaptation

33. Pasture productivity, hay yields, and fodder crops are strongly influenced by climate conditions. The gradual reduction in summer rainfall and increased warming during the growing season is likely to cause reduced productivity in grasslands and an increase in bare ground (Zha et al. 2005), leading to increased soil moisture evaporation resulting and to a negative feedback process that can accelerate grassland degradation (Milton et al. 1994). The UNFCCC projects that grassland productivity will decline in the semi-arid and arid regions of Asia by as much as 40-90% for an increase in temperature of 2-3°C combined with reduced summer precipitation.

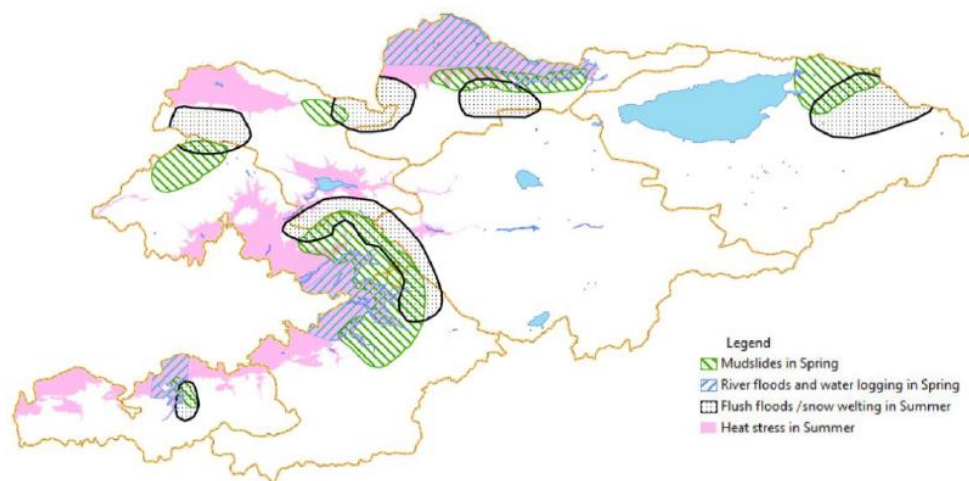
34. During the project development phase of LMDPII in 2013, IFAD undertook the study "Climate Change Impact on Pastures and Livestock in Kyrgyzstan". Using GIS modelling, the research made preliminary recommendations on how to reduce climate risks for Kyrgyzstan's livestock sector and increase the resilience of small-scale herders in rural and mountain communities. The study performed an analysis of current climate risks and projected climate change impacts on pasture and livestock management in Kyrgyzstan, and provides: (i) A set of pastures and livestock vulnerability maps describing forecast of changes in temperature and rainfall in the different parts of the country, and a preliminary assessment of the locations within Kyrgyzstan that are particularly vulnerable under present climate variability and projected climate change, prioritising geographic areas for future interventions; (ii) A technical report explaining the findings, including key data sources, modelling assumptions, consultations undertaken; (iii) A set of preliminary recommendations on the measures that are proposed to decrease the vulnerability of pastures and pasture-dependant livelihoods.

Figure 5: Map of levels of vulnerability to climate change in Kyrgyzstan (IFAD, 2013)



35. The study provides the following results regarding vulnerability to climate change:
- At lower altitudes (< 1,500 m) vulnerability is mainly linked to heat stress in summer, when pastures and livestock will phase harsher conditions. Areas of very high vulnerability are north of Chuy Oblast and east of Talas Oblast with an increase of average maximum temperatures by 2.5°-3°C, reaching more than 30°C. Fergana valley is also a high vulnerable area with an increase of 1.5°-2°C, also reaching 30°C. Future hazards are river floods and water logging in spring, which will increasingly affect infrastructures.
 - At middle altitude (1,500-2,500 m) vulnerability is low because increases in maximum temperature in summer will not reach 30°C, with better conditions for pastures, despite the increasing likelihood of water deficits in summer at certain locations. More intense rainfall in spring will increase the risk of mudslides that could impact infrastructures and access of livestock to spring pastures. The most vulnerable areas are the Fergana Range, eastern Issyk-Kul, central Batken, eastern and western Talas, western Jalal-Abad and south and western Chuy.
 - At high altitudes (> 2,500 m) vulnerability is very low because general increases in temperatures will benefit pastures and livestock. Higher altitudes will be more vulnerable to flush floods and snow melting in summer due to the increase in temperature together with higher winter, spring and autumn rainfall. This will increase damages to infrastructures, especially in the Fergana Range, western and eastern Talas, south ad western Chuy, central Batken and eastern Issyk-Kul.
36. IFAD mainstreamed the findings and recommendations of the study in the climate adaptation work embedded in LMPDII. This work consists of: (i) Policy dialogue con climate change adaptation; (ii) a pasture inventory and livestock carrying capacity assessment; (iii) The development and upgrading of Community Pasture Management Plans (CPMPs) with a strong adaptation and NRM focus, followed by the funding of community investment projects for the implementation of the main CPMP findings and recommendations; (iv) institutional strengthening for adaptation and vulnerability reduction in collaboration with the Kyrgyz Agrarian University and Livestock and Pastures Research Institute; (v) design and set up of an Early Warning System (EWS) for pastures and livestock aimed at minimising or avoiding the impact of climate-induce natural disasters; and (vi) promotion of income diversification for climate vulnerability reduction.

Figure 6: Main changes in hazards due to climate change



37. The above study was carried out at the nation-wide level, generating key information for the whole territory of the Kyrgyz Republic. ATMP should thus ensure that the findings and recommendations of the “Climate Change Impact on Pastures and Livestock in Kyrgyzstan” study are also applied in those oblasts where LMDPII is not active, also building on the lessons learned in the three target oblasts of LMDPII. The SECAP strongly recommends that the ATMP project development team actively uses the “Climate Change Impact on Pastures and Livestock in Kyrgyzstan” study as a baseline resource during the full development stage of the project.

3. Environmental and social category

38. The project should qualify for *category B*, provided it fully integrates the approach, measures, lessons learned, and best practices of LMDPII, and is used as a vehicle to upscale and expand the sustainability work of LMDPII at the national scales and through all the steps of the livestock value chains. The rationale and justification of ATMP recognises that main constraints that need to be addressed to improve livestock production include inadequate animal feeding due to poor utilization of pasture resources, poor animal health, and inappropriate farm management practices. Moreover, the proposed program implementation approach of ATMP seeks to address the sector constraints by facilitating access to modern production and processing technologies, best practices, capacity building.

39. In order to meet these objectives, SECAP recommends that - in the three target oblasts of LMDPII – ATMP works in close synergy with the Pasture Committees (PC) and Pasture Users Unions (PUU) engaged in the development and implementation of the risk-mitigation Community Pasture Management Plans (CPMP⁸²) that provide the basis to improve the sustainability of the pastures and enhance their resilience, through the siting, design, implementation and maintenance of the investments to be financed by LMDPII in each PC/PUU. These include: (i) CPMPs that already existed prior to LMDPII implementation, and that are being improved to effectively integrate animal health planning, improved winter feeding, climate adaptation measures and risk-mitigation or investments; and (ii) new CPMPs developed with the direct support of LMDPII, and integrating sustainability and risk-mitigation measures from the offset. In both cases, LMDPII fosters the development CPMPs that include a balanced mix of investments for climate change adaptation and disaster risk reduction that include, *inter alia*:

⁸² When fully developed CPMPs should include the following: vulnerability assessment; livestock inventory; pasture assessment plan with the map; annual pasture use plan with the map (updated annually); pasture improvement plan; infrastructure improvement plan; animal health plan; winter feeding plan; risk mitigation plan; secondary pasture use plan (to take into consideration seasonal adjustments and include needed investments in additional income-generating activities); environmental protection plan focusing on interactions with forest land; finance and investment plan; conflicts mitigation plan.

- Restoration of degraded pastures through rotation and fencing, and improvement of vegetation cover and yield/ha with highly diverse native plant species/genetic varieties tolerant to climate constraints;
- Infrastructure that allow/facilitate the revival of traditional management (transhumance), which is critical to adapt the seasonal livestock pressure on winter and summer pastures to climate conditions (road improvement, connectivity bridges, stock watering points, etc.);
- Water management measures to favour pasture resilience through increased water retention and regulation and to improve water balance (fences for shade, measures to retain water in soil, drainage, riverine and water spring restoration, protection through reforestation in water points);
- Measures to prevent soil erosion, mudslides and floods, including the plantation of bushes and trees that, besides being effective against soil erosion, can act as a barrier against storms and wind, and serve as a source of by-products (fruit, berries, wood);
- Infrastructure to enhance the value of spring/autumn pastures in view of the longer grazing season allowed by increased temperatures and shorter winter season (construction of livestock shelters and upgrading of facilities for herders);
- Agricultural machinery to produce/harvest/store fodder (grass cutters, hay making machines, silage choppers, etc.) to increase the availability of fodder and create reserves for the long winter period.
- Restoration of riverine vegetation (better regulation of water, barrier against floods, improve water quality, source of fodder). Whenever possible, these measures would be carried out with use of adapted technology that allows energy saving and easy maintenance and replication (i.e. the thermo-isolation of shelters and stabling structures using straw was successfully tested in previous projects). The project, through a number of restrictions and safeguards, will make sure that CPMPs include a balanced mix of investment activities, and that they properly capture the need for specific interventions on climate change adaptation and disaster risk reduction. The outcomes and recommendations of the vulnerability risk assessment carried out by IFAD during the project development phase will be instrumental in this respect, as they will be used to raise awareness and enhance understanding at the PUU level, thanks to proper training and briefing sessions that will be organised by ARIS prior to the start of the participatory design process leading to the formulation of the CPMPs.
- Community Fodder Seed Programme. Like with LMDP-I, the Project will collaborate with the National Federation of Community Seed Funds (NFCSF) to establish about 90 Community Seed Funds (CSFs) for winter fodder crops in Batken, Jalalabad and Osh oblasts.

40. The above participatory planning and investments supported by LMPDII should inspire the service providers that, through subcomponent 1.1 and 1.2 of ATMP, are set to assist the Leading Entities and associated value chain participants to prepare and implement investment proposals at key points along the value chain (Value Chain Development Business Plans (VCDBPs), including the necessary infrastructure for livestock marketing and processing, which represents the main focus of ATMP.

41. In those oblasts where LMDP-II is not active, ATMP should prepare the ground for the introduction of these environmental sustainability elements through an appropriate capacity building process targeting all concerned stakeholders and using the skills built within LMDP-II actors (PCs, PUUs, ARIS etc.). The platform for Public-Private-Producers Partnerships Development, Knowledge Management and Innovations envisaged under Subcomponent 1.3 of ATMP seems an ideal tool to support this capacity building exercise.

42. From the social point of view, ATMP should capture the need to promote diversification of income sources in order to support rural livelihoods and build socio-economic resilience by reducing the risk of income loss caused by climate change. LMDP-II aims to encourage and nurture new enterprises through which the weakest segments of the rural society – mainly women – can build

upon, improve, and expand existing value chains and develop additional sources of income, becoming service providers for the wider community.

43. The target value chains can also serve as a useful tool to ensure compliance with some labour standards including occupational health and safety - an area increasingly recognised as requiring attention. During the ATMP design process, it would be worthwhile to identify critical entry points in the proposed value chains, for enhanced mainstreaming of possible actions identified in this field.

4. Climate risk category

44. The project should qualify for *Moderate Risk*, provided it is fully integrated with the LMPDII interventions, which have been designed and are being implemented through an ASAP grant aiming to mainstream climate change adaptation into the whole LMPDII investment.

45. In addition to the approaches and arrangements for climate change adaptation mentioned in Chapter 3, ASAP funding contributes to LMPDII through the development of an Early Warning System (EWS) for pastures and livestock, which is intended to provide policymakers, technicians, pasture committees and farmers with the most up-to-date and accurate information available on meteorological-related risks. The EWS comprises the following components: (i) an Automated Weather Forecasting System (AWFS); (ii) integrated models of derived variables (DVM); and (iii) a GIS (Geographical Information System) platform to adapt the information to the user's needs and to facilitate its management. This is coupled with a capacity building program to prepare institutions and beneficiaries in the implementation and use of the EWS tool. The EWS counts on the experience of the Hydrology and Water Resources Department of the Slavic University in applying hydrological models, to link them to the EWS thus providing timely information on water balances and hazards (river floods, flush floods) and forecasting their effects on pasture systems. The information provided by the hydrologic model should allow the implementation of preventive actions to mitigate future water conditions and the effects on pastures. It is envisaged that Kyrgyz Government will be supporting the system with its own budget after the completion of LMDPII.

46. The integration of the EWS knowledge and technology will help meet the objective of Component 1 of AMDP to support increased management skills, improved access to demand-driven technology, and enhance linkages and partnerships amongst livestock value chain actors. It is particularly relevant to the Subcomponent 1.1, which is set to provide capacity building through training and on-farm demonstrations, piloting of innovative and climate smart technologies. Once again, the Platform for Public-Private-Producers Partnerships Development, Knowledge Management and Innovations foreseen under Subcomponent 1.3 of AMDP could provide the framework for enhancing the value of EWS and expanding its use to the whole national territory. LMDPII will equip and provide training to several Kyrgyz institutions (e.g. the Hydromet Agency, the Pasture Department) that will host the EWS. This will allow AMDP to incorporate climate vulnerability analyses along the selected value chains (e.g. meat and dairy). The SECAP recommends that, during the Design Completion Mission foreseen for July-August 2016, the Mission meets with Hydromet Agency, the Pasture Department to discuss how to incorporate the climate vulnerability analyses once the EWS supported by LMDPII becomes fully operative. The IFAD *How To Do Note on assessing climate risk assessment in value chain projects* could be a helpful resource for this endeavour.

47. In case the above recommendations are met, AMDP would be strongly aligned with, and contribute to the priorities of the NCs to the UNFCCC, the INDC to CC adaptation and mitigation, the sectorial plans and programmes for adaptation, as well as the recently-issued National Strategy and Climate Change Adaptation Plan, which identify livestock and pasture management as one of the most vulnerable areas to climate change in the Kyrgyz Republic. AMDP would also be in line with the Strategy and Action Plan on Biodiversity Conservation (1998) and subsequent national reports issued by the Kyrgyz Republic after the ratification of the Convention on Biological Diversity (CBD), and the National Action Plan to mitigate and prevent desertification processes (NAP-CCD) prepared by the Ministry of Agriculture, Water Resources and Processing Industry after ratification UN Convention to Combat Desertification (UNCCD).

5. Recommended features⁸³ of project design and implementation

5.1. Mitigation measures

48. The project should ensure full integration with the LMDPII project, which benefits of the contribution of an ASAP grant of US\$ 10 million, to help mainstream CC adaptation into pasture management, water harvesting and conservation, fodder and livestock productivity and the diversification of local livelihoods. The project has also a poverty-reduction objective, as its primary target group are smallholder livestock farmers who participate in and benefit from improved value chains - a great majority of livestock owners are smallholders, and the poor constitute an important share of this social category. By involving these communities into improved value chains, sustainable NRM and livestock production, and creating complementary, sustainable means of income generation, the project will help increase local standards of living while reducing climate-related risks and decrease pressure on natural resources in general. Subcomponent 2.1 of ATMP also addresses poverty reduction, as credit usage in Kyrgyzstan is higher among rural residents (14.3%) and the poorest 40% (14.4%).

49. The Pasture Law adopted in January 2009 reconnects the management of summer, spring/autumn and winter pastures, provides more equitable and transparent allocation of pasture use rights, provides a mechanism whereby stocking rates can be better aligned with pasture carrying capacity and is expected to considerably increase generation of revenues for investment in pastures as well as in local development through land tax revenues. The LMDPI&II pasture institutional strengthening interventions, have the objective to build capacity of the national institutions and other partners, including civil society organizations and existing networks, which are active in the fields of capacity building, planning and policy dialogue relevant to climate change adaptation, sustainable development of pastures and successful innovative work in income generating activities.

50. The integration of ATMP with LMDP will help address critical elements for the effective functioning of the new governance structures and arrangements for pasture management established by the new Pasture Law are addressed. These include: (i) strengthening the institutional capacity for the transfer of authority for pasture management to the lowest level of government, the delegation of authority for pasture management from AOs to Pasture Users' Unions (PUUs), and the demarcation and legal registration of the administrative boundaries of pasture areas to be managed by each PUU; (ii) more equitable access of pasture users to resources through broad-based representation in the PUU general assembly; (iii) preparation of Community Pasture Management Plans (CPMPs) by Pasture Committees (PCs), with the allocation of pasture use rights and an annual use plan reflected in pasture tickets, which determine the number of animal grazing days and grazing routes to be used, and the volume and location of collection and harvesting of other pasture resources by each ticket holder.

5.2. Multi-benefit approaches

51. Although the focus of ATMP is mainly on livestock marketing and processing, its integration with the on-going IFAD program that addresses constraints such as inadequate animal feeding due to poor utilization of pasture resources, poor animal health, inappropriate farm management practices, and its function of helping upscale at a national level the lessons learned in these fields in the oblasts where LMPDII is being implemented, will allow the overall IFAD intervention to have an impact on smallholders' income and rural livelihoods in general, and achieve economic, social, and environmental benefits in a framework of sustainability, by impacting this critical sector of the economy.

5.3. Incentives for good practices

52. The "aggregated" approach of the program will strengthen the linkages amongst the various actors along the value chain, collectively generating positive externalities (e.g. improved yields, better

⁸³ Guidelines as to what constitutes ENRM Core Principles and Best-Practice Statement can be found in IFAD 'Environment and Natural Resource Management Policy' (2011)

infrastructure, household improvements, safer and better quality livestock products, expanded employment) and providing solid grounds for better focus (i.e., farmers produce livestock products while processors transform it), and hence, higher competitiveness. The proposed investment will enable livestock value chain actors to increase their investment in profitable livestock value chains through the provision of grants and by linking them with external credit lines. In addition, the activities of Component 2 of ATMP will include the development of innovative financial products for agricultural producers and processors through the cooperation with financial service providers. This part of the project should contribute to supporting good practices, by replacing old machinery and equipment with newer technology that can contribute to a more sustainable management of the pastures. The project will also support training and on-farm demonstrations piloting of innovative and climate smart technologies, targeted advisory services and exposure to the best international practices through the participation in study tours and trade fairs. The Program's strategy to ensure women's inclusion in value chains and equitable access to opportunities will primarily benefit female producers through the identification of nontraditional livestock products and the promotion of women's employment especially at higher levels of the value chains (e.g. processing, retailing).

53. On the other hand, the integration of ATMP with LMPDII will contribute to strengthening, multiplying, and upscaling the good practices that the latter is promoting in its three target oblasts, and the incremental production resulting from the the implementation of the Community Pasture Management Plans and Diversification/Value Chain Grants for women (e.g. milk value chain business groups), and additional income generation activities. LMPDII is also set to improve about 193,420 Ha of pastures, including the rehabilitation (superficial and radical improvements) of around 17,000 Ha of pastures. It is also expected that through LMPDII herders' communities and their organisations will be strengthened through participatory and gender sensitive approaches matched with equally strengthened capacity of government agencies and other service providers, who will be able to meet expressed community priorities in a timely and transparent manner.

54. The integrated implementation of the IFAD interventions in the Kyrgyz livestock and pastures sectors will generate a diverse set of economic, social, and environmental benefits, deriving from: (i) increased pasture yields and less vulnerable pastures; (ii) raised feed crop yields and expanded cultivated feed crop area; (iii) improved resilience and capacity of smallholders for livestock and pasture management; (iv) reductions in livestock mortality and improved livestock performance; (v) opportunities for better breed improvement and selection; and (vi) reducing risk through the installation of an early warning system to benefit pasture communities; (vii) promotion of competitive input supply, service provision and processing small and medium enterprises; (viii) improved access to loans and improved technology and business development and management techniques; (ix) improved quality standards for raw products, improved quality control and delivery mechanisms, and better managed seasonality of supply; (ix) reduced public health risk due to healthier livestock and more sanitary milk and meat production and processing.

5.4. Participatory processes

55. ATMP proposes a "cluster" or "aggregated" approach whereby agro-processors benefit from access to loans and improved technology and business development and management techniques, while working in productive partnerships with the smallholder farmers. This approach will also provide for strengthening of the linkages amongst the various actors along the value chain, collectively generating positive externalities and providing solid grounds for better focus.

56. The project has value chain-wide approach, whereby the entry point is the value chain champion also referred as "driver of change". The concept of drivers of change refers to the willingness of a legal entity to invest time and resources to increasing value chain competitiveness in a way that enhances benefits to small- and medium-scale producers. These drivers of change are typically larger, financially stronger or more innovative firms, but the leadership can also come from a public-sector association or even a well-organized, skilled group of producers. Through Subcomponent 1.1, ATMP will deliver demand-driven capacity building and advisory services for the participants of pre-selected value chains led by the "drivers of change". The project will support a wide

participation of beneficiaries by inviting all interested value chain stakeholders (processors, aggregators, civil society, entrepreneurs, producers' groups) to apply for the role of a "driver of change" or Leading Entities (LEs).

57. An important aspect of the participatory approach envisaged in the project is the platform for the exchanges among actors in the value chains for better and innovative integration of market demand into production models. While the platform will provide an opportunity for all value chain actors to share experiences and concerns, it will also allow and create a space for the producers and buyers for a constructive dialogue on product specifications.

58. The SECAP recommends that the project includes in its inception phase a baseline assessment of: (i) the participatory processes promoted through the other IFAD interventions in the country, especially LMPDII; and (ii) the successful achievements and the pilot activities tested through previous IFAD projects, and on the best practices and lessons learned by other donors engaged in livestock and agriculture development in the Kyrgyz Republic, including FAO, WB, EBRD, GIZ, IFC, KfW etc.

6. Analysis of alternatives

59. Not applicable (social objectives are already included in the project design, and environmental/climate change adaptation objectives are part of the LMPDII interventions that supposedly will be fully integrated with ATMP).

7. Institutional analysis.

7.1. Institutional framework

60. The MoAM will be the implementing agency for ATMP. The program will have the same implementation modalities as LMDP. Specifically, the APIU and ARIS would have the prime responsibility for the implementation of ATMP, and each would have its clear areas of responsibility and would be financially accountable for the implementation of its own activities, with the APIU having overall responsibility for program oversight and coordination, and ARIS would be responsible for implementation of all those aspects that involve communities and the management of program grants. Memoranda of Understanding (MOUs) would be drawn up between the APIU and ARIS and between the APIU and the other implementing partners for which the APIU has responsibility.

61. The SIVPS will be the implementing partner for Component 3. Business advisory services provisioned in Component 1 will be channeled through EBRD's Business Advisory Services facility with the ultimate goal to bring the businesses to the credit-worthy level.

7.2. Capacity building

62. The whole Component 1 of ATMP "Livestock Value Chains Development" will have strong focus on capacity building, and its outcome will be "*capacity for sustainable, efficient livestock production, processing and marketing enhanced*". The component will support increased management skills, improved access to demand-driven technology, and enhanced linkages and partnerships amongst livestock value chain actors (producers, aggregators, traders, processors).

63. More specifically, Subcomponent 1.1. "Capacity Building of Livestock Value Chain Stakeholders" will entail demand-driven capacity building and advisory services for the participants of pre-selected value chains led by the "drivers of change". According to the project's approach, pre-selection will be conducted at start-up by a mapping exercise coupled by a rapid analysis of potential livestock value chains based on the pre-design "End Market Assessment Study" prepared by IFAD. More specifically, through information campaign ATMP will invite all interested value chain stakeholders (processors, aggregators, civil society, entrepreneurs, producers' groups) to apply for the role of a "driver of change" or Leading Entities (LEs).

64. The service providers will assist eligible LEs and associated value chain participants to prepare bankable investment proposals at key points along the value chain (Value Chain Development Business Plans - VCDBPs). The VCDBPs will include all envisaged activities within the value chain,

including associated capacity building. The Subcomponent will also provide capacity building through training and on-farm demonstrations, piloting of innovative and climate smart technologies, targeted advisory services and exposure to the best international practices through the participation in study tours and trade fairs targeted at: (i) Smallholder/peasant farmers and their groups; (ii) Traders of raw material (milk, animals, wool, skins, honey); (iii) Private veterinaries and zoo-technicians; (iv) Agribusinesses; and (v) Unemployed youth in rural areas.

65. The SECAP recommends that, during the Design Completion Mission foreseen for July-August 2016, the Mission undertakes an assessment of the capacity building work planned through the various components of LMDPII, to understand how the modules developed and the skills built by this project especially in the field of environmental sustainability, climate change adaptation and economic diversification can be used at the advantage of the capacity building work that will be carried out by ATMP.

7.3. Additional funding

66. The effective integration of ATMP with LMPDII will allow the new project to benefit of the environmental and climate change adaptation interventions covered through the 10 US\$ million grant from ASAP. Provided integration takes place in an effective way, no additional funding would be required to cover the environmental sustainability needs of ATMP.

8. Monitoring and Evaluation

67. The implementation of ATMP will be guided by the program's logical framework. Key performance indicators will include the: (i) percentage of households that increase their index of household assets ownership (Results and Impact Management System-RIMS anchor indicator); (ii) percentage reduction of child malnutrition (RIMS anchor indicator); (iii) number of productive partnerships; (iv) the increased volume and quality of livestock products profitably collected from smallholder farmers; (v) number of participating farmers applying received knowledge; (vi) number of decent rural jobs created; (vii) the uptake of improved technology; (viii) the profitable uptake of credit; and (ix) the number of profitable operations by women and youth.

68. The SECAP recommends that, during the development of the full M&E plan for ATMP, the project team takes into consideration the climate change impact analysis, and the gender sensitive, livelihoods-oriented baseline survey carried out at the start of the LMPDII program. The objective of this baseline survey is to establish benchmarks for time-series comparisons between program beneficiaries and non-beneficiary 'control' populations. The survey includes biophysical and socio-economic baseline, and detailed indicators developed by the Gender, M&E and KM team in the APIU, using the key indicators in the Logframe and RIMS Framework of LMPDII, including the indicators associated with ASAP which will be needed to verify impact on climate resilience.

9. Further information required to complete screening, if any

69. There is no need for additional information to complete screening.

10. Budgetary resources and schedule

70. Not applicable.

11. Record of consultations with beneficiaries, civil society, general public, etc.

71. The project design team held meetings with representatives of the Ministry of Agriculture and Melioration; the State Inspectorate for Veterinary and Phytosanitary Security (SIVPS); the Ministry of Finance, the Ministry of the Economy and the National Bank of Kyrgyzstan; the Director of the Agricultural Projects' Implementation Unit (APIU), the Executive Director of ARIS (Community Development and Investment Agency); the Head of the Secretariat of the Business Development and Investments Council under the GOK; the Russian Kyrgyz Development Fund (RKDF); public and private banking institutions; the Credit and Information Bureau "Ishenim"; the senior management and representative of the Veterinary Chamber and the National Association of Meat Producers;

representatives of private veterinarian associations, local NGOs, private consulting firms and training service providers.

72. The Mission also met with donors engaged in livestock and agriculture development including the Food and Agriculture Organization (FAO), the World Bank (WB), the European Bank for Reconstruction and Development (EBRD), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Finance Corporation (IFC), KfW, the EBRD's Small Business Support (SBS), UN Women and with key research institutions including the Kyrgyz Scientific and Research Institute of Livestock and Pasture (KSRLP) and the Kyrgyz Scientific Research Veterinary Institute.

73. In the field the mission met with officials of aiyl okmotu (local government body) and aiyl kenesh (local elected council), ARIS regional and district staff representatives of zhayit committees (pasture user unions), regional branches of banking institutions, technical agencies, milk and meat processors and other agro-enterprises, and with private farmers, households and private vets.

74. While discussing with the RKDF the possible cooperation options, a request came across to test-drive them in a concrete case. There have been some good ideas submitted to the RKDF by entrepreneurs but lacking supporting elements like a sound business plan and linkages with the raw material producers. An agreement has been reached to initiate a pilot within the ongoing LMPD's Diversification Component to fine-tune the proposed implementation procedures for the ATMP. This is in turn would be beneficial for progressing the Component as well. It has been also agreed that ARIS would hire a national consultant to develop the proposal for such a pilot as well as to coordinate its implementation.

75. The SECAP recommends close coordination with the LMDP during the implementation of the ATMP to achieve an ideal integration between the on-going and new IFAD interventions, and ensure that the achievements, best practices, and lessons learned especially in the areas of environmental and social sustainability are properly integrated in ATMP design in view of their multiplication and upscaling at the national level.

Appendix 13: Contents of the Project Life File

A. Project design cycle: key meetings and events

IFAD Project ID Number:

Project Design and Learning Cycle

B. Project design documents

C. ATMP working papers

Working Paper No. 1

Livestock Value Chains Development

Working Paper No. 2

Livestock Value Chains Financing

Working Paper No. 3

Upgrading the Kyrgyz Livestock Sanitary System

Working Paper No. 4

ATMP Cost Tables: Attachment 1 – Summary Cost Tables, Attachment 2 – Detailed Cost Tables and Attachment 3 – Parameters (set of Excel files)

ATMP COSTAB Tables File

Working Paper No. 5

Economic and Financial Analysis (set of Excel files)

D. Rapid End Markets Assessment

Volume I: Cow Milk

Volume II: Mutton and Wool

Volume III: Beef

Volume IV: Hides

E. Extended Project Logical Framework

F. 18-month Procurement Plan (Excel file)

G. Relevant country strategy and government documents