



Investing in rural people

Republic of Turkey

Ardahan-Kars-Artvin Development Project (AKADP)

Supervision report

Main report and appendices

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Abbreviations and acronyms

AKADP	Ardahan-Kars-Artvin Development Project
ALM	Ardahan Livestock Market
FM	Financial Management
GoT	Government of Turkey
GDAR	General Directorate of Agricultural Reform of MFAL
LSM	Livestock market
LWF	Livestock water facilities
MCC	Milk Collection Center
MFAL	Ministry of Food, Agriculture and Livestock
P/DDFAL	Provincial and District Directorates of MFAL
SM	Supervision Mission
SPA	Special Provincial Administration

A. Introduction¹

1. A Joint Supervision Mission was conducted between 7 and 18 November 2016 to provide implementation support to the Ardahan-Kars-Artvin Development Project (AKADP) which is jointly financed by the Government of Turkey (GoT) and a loan from IFAD. The mission was accompanied by project counterparts from the Ministry of Food, Agriculture and Livestock (MFAL), the AKADP Project Management Unit (PMU) and a representative from the United Nations Development Programme (UNDP). During its field visits, the mission met various stakeholders including farmers, farmers' organizations, cooperatives and local administrations. The mission met the Governor of Ardahan and Directors of the District Directorate of MFAL (P/DDFAL) in Ardahan and Kars and benefited from their insights.
2. The mission met staff of the P/DDFAL and Special Provincial Administration (SPAs), which are responsible for development of village infrastructure facilities (pasture roads, livestock water facilities, etc.) financed by the Project. The mission is grateful to the representatives of MFAL at central, provincial and district levels for their support, cooperation and hospitality. The mission also appreciates the efforts and support in organizing and conducting the mission by the Regional Project Administrator and all PMU project staff.
3. The overall goal of AKADP is to reduce rural poverty in Project areas. The objectives are to: (i) increase the assets and incomes of poor women and men smallholders and of small rural entrepreneurs, who have the potential and personal willingness to move towards commercial agriculture and other income generating activities; (ii) improve poor rural people's access to infrastructure providing direct and indirect benefits to primary producers and small enterprises; and (iii) strengthen institutional advisory services and project management capacity.
4. AKADP entered into force on 2 July 2010, and constitutes an investment of USD 26.6 million, of which an IFAD loan amounts to USD 19.2 million. The Project provides support to the livestock and horticultural sectors in Kars, Ardahan and Artvin provinces mainly in the form of co-financing of investments, demonstrations and training, and infrastructure. The original project completion date was 30 September 2015, but following a GoT request, the project was extended by two years. The current Project completion date is on 30 September 2017.
5. The objective of the mission was to review actions taken on recommendations of the May 2015 IFAD Supervision Mission and December 2015 Implementation support mission on M&E aspects, and assess the results and compliance with the Financing Agreement.

B. Overall assessment of Project implementation

(Rating: **Moderately unsatisfactory**)

6. The mission concluded that recognisable progress was achieved over the past two years but more so, during the reporting period in several areas of the project such as establishment of greenhouses and orchards, and in civil works related to livestock markets and pasture roads. Likewise, the mission confirmed the positive impact of project support to improved forage production and high demand from farmers. These achievements were significant in light of the serious shortcomings faced by the project due to delayed implementation since the project started, compounded by high staff turnover and more recently, the departure of the Project Regional Coordinator in May 2015. This key position remained vacant for five months. Not surprisingly, the project only spent 58.1% of budget planned in the 2015 AWPB.
7. The total cumulative amount of actual project expenditures as of October 31, 2016 is USD 13.1 million, financed by IFAD loan (USD 9.3 million), MFAL (USD 2.5 million) and beneficiaries (USD 1.3 million). It represents 49% of total funds allocated to the project. The mission estimates

1 Mission composition: Ms. Dina Saleh, IFAD's Country Programme Manager; Mr. Giovanni Munoz, Mission leader and Engineer (FAO); Mr. Steven Watkins, Agronomist and Marketing/Value Chain Specialist (FAO); Mr. Enrico Mazzoli, Economist and M&E Specialist (FAO Consultant); Ms. Stefania Gnoato, M&E, Gender, KM and Learning Specialist (IFAD Consultant); Mr. Cihat Yildiz, Finance and Procurement Specialist (FAO Consultant) and Ms. Eymen Yazgi, Agricultural Engineer (FAO JTO). During its fieldwork the Mission was accompanied by a MFAL team composed of Ms. Saliha Akbas, Externally Funded Project Group Coordinator; Ms. Nejla Furtana, Agricultural Engineer; Ms. Aylin Çelik, Agricultural Engineer, General Directorate of Agrarian Reform, Department of Rural Development, MFAL. UNDP was represented in the field mission by Mr. Guray Balaban, Civil Works Procurement and Contracts Officer. The AKADP team composed of Mr. Murat Çevik, Regional Project Administrator; Mr. Mahmut Sevgi, Agricultural Economist; Mr. Ertunç Yardımcı, Field Engineer and Mr. Umur Sedat Örkmez, Field Engineer. Ms. Pelin Rodoplu, Portfolio Manager, and Mr. Burak Eldem, Portfolio Administrator from UNDP joined the mission in Ankara from 14 November.

approximately 25,000 HHs have benefitted from the project. In late 2014, a decision was taken to increase the number of targeted villages from 160 to 597; the geographic expansion is considered as an increase in eligible villages rather than increased targets. The mission received a request by Ardahan province supported by the MFAL, to include the district of Damal into the project. As the request meets project eligibility criteria, the mission recommends the district of Damal to be included in the 2017 AWPB.

8. The accuracy of the project target achievements would be best assessed by the impact assessment at project completion. In all cases, the mission considers that some of the completed investments have sustainability risks due to a lack of clearly agreed plans for managing, operating and maintaining assets and systems.

9. The execution of the 2016 AWPB shows good progress and over-achievement in a number of activities, namely, area under improved forage crops, number of orchards and greenhouses and training activities. While works implemented through the Special Provincial Administration (SPA) advance, the short construction season of four months, compounded by the late finalisation of procurement processes, has meant delays in building roads and Livestock Water Facilities (LWF) in the uplands this year. The follow-up to the recommendations made by the 2015 supervision mission is limited and in some cases, no follow-up was done.

10. The lack of a proper M&E system hampers the possibility of using project generated information in decision-making to improve project implementation. In addition, project basic data and statistics have only partially been maintained during the project lifetime. The mission recommends once more, as previous missions have done, to recruit an M&E consultant as soon as possible. This recommendation considers the fact that the project completion date (30 Sept. 2017) is only 10 months away and PMU will need to place additional emphasis on designing the impact assessment of the project properly (by December 2016), conducting the assessment (latest by July 2017) feeding into the project completion report (PCR) which should be completed by December 2017.

11. Data reviewed by the mission show the project has focused predominantly on more prosperous farmers and less on poorer segments of the population. In order to improve the pro-poor targeting focus of the project, it is recommended that in 2017 MFAL deploy efforts to deliver services to farmers with lower land and livestock assets, as defined at appraisal or at least, ensure strong backward linkages and creation of income-earning opportunities for this segment of the population.

12. Notwithstanding the positive achievements, the mission noted with concern that overall Project performance during the current reporting period has decreased partly due to the absence of a Regional Administrator for five months in 2015 as well as the currently unmanned M&E, procurement and finance positions. The high turnover of staff at both the Project Management Unit (PMU) maintained by UNDP and the limited human resources available in the Externally-Funded Project Group of the Ministry of Food, Agriculture and Livestock (MFAL) negatively affected project implementation and decreased coherence due to limited institutional memory. As a result, the total project expenditures of 2016 are expected to be lower than that of the previous two years. Payments against the AWPB 2016 as at October 31, 2016 amount to USD 2.1 million, representing 48% of the USD 4.4 million planned for the year. Total cumulative expenditures stand at 49% of total funds allocated to the project. Being in its sixth and entering its final year, this figure indicates the project is likely to fall short of the expected target by the Project completion date. Despite recommendations by previous missions, the project has yet to develop a proper exit strategy to guarantee the stability and sustainability of the interventions. The mission reiterated the need to focus the next AWPB on interventions that will improve linkages between project components, as originally intended at project appraisal.

Agreed action	Responsibility	Agreed date
Hire full-time M&E consultancy services	PMU	January 2017
Draft ToRs for the Impact Assessment	PMU/IFAD	December 2016
Conduct Impact Assessment Survey	PMU/ MFAL	By 31 July 2017
Include Damal into the AWPB	PMU/MFAL	December 2016
Improve the targeting in the AWPB making it more pro-poor	PMU/MFAL	December 2016
Develop a sound Exit Strategy to ensure sustainability of project achievements	PMU/MFAL	Immediately
Ensure maximization of impact and outreach through linkages between project Components	MFAL	December 2016

B. Outputs and outcomes

Component 1. Smallholder and Non-farm Enterprise Investments (USD 11.22 million) (Rating: Moderately Satisfactory)

13. During the review period, the project focussed on relatively successful activities, such as fodder production, orchards and greenhouses. Interventions such as the milk collection centres, have not progressed since the previous SM in May 2015 and their viability remain questionable. The project progressed against targets for fodder crop support with provision of seed, training and machinery. Posof District (Ardahan) was added to the project during 2015-16 with extra horticulture activities. The component recorded improved financial disbursement but had only expended 40 percent of its annual budget allocation. Activities continue to be driven by P/DDAs with little observed analysis of the prevailing operational environment informing investment decisions nor adequate targeting of beneficiary farmers.

14. **Sub-Component 1.1. Improvement of Livestock Husbandry Practices** mainly targeted dairy farmers for cheese production. Activities focused on provision of fodder crop seed, feed conservation machinery, training, exchange visits and support to milk processors. Almost 30 Mt of fodder seed were distributed to 330 farmers during 2015/16 and 30 farmers were trained in improved silage production. Farmers met during the mission were satisfied with their productivity gains from improved pastures. This activity largely overlooked the smaller, target farmers with 20 cows or less, and focused on farmers with sufficient irrigated land, labour and mechanisation to obtain the productivity gains.

15. A total of 254 farmers were trained on improved husbandry practices, animal health and hygienic milk production which received mixed reactions. Farmers met in Kars were critical of the methodology, content, and quality of trainers because of a mismatch between the course content and the advanced level of the trainees who questioned the value-addition. However, training was also provided to 15 local milk processors who visited other dairy production areas of Turkey to learn about cold milk supply chains, food safety, and marketing.

16. The semi-open barns proposed to local farmers were too expensive. PMU suggested a higher stocking rate in semi-open barns to reduce costs; new designs were agreed and three pilot barns were to be constructed during 2015, but were not built due to tendering delays. Well-constructed, good hygiene closed barns for smallholders (20-40 cows) were observed during the mission, some of which have been built with support from a parallel government co-financing program building closed barns in project districts. This has lessened the needs for the semi-open barns. Rehabilitation of existing barns could have proved successful, but was not pursued. Other farm infrastructure facilities that should be demonstrated is proper construction and operation of safe silage making in pits.

17. The project co-financed one entrepreneur to purchase silage-making equipment and he established a successful business. Additionally, AKADP supported a Kars entrepreneur manufacturing cheaper, lower capacity silage machines more suited to smallholders and six machines were co-financed.

18. The four milk collection centres (MCC) co-financed with the Kars Dairy Association (two) and the Ardahan Breeders Association (two) remained non-operational. Association officials claimed the units were only completed during 2016, but they had received commitments from farmers to supply MCCs when the season starts in Spring 2017. Milk processors met during the mission were sceptical that the law banning un-chilled milk delivery would be enforced. The Associations and PMU had not completed the business analysis for milk collection as requested by the previous mission. The competitiveness of MCCs against existing networks is questionable however, the project should

support MCCs with technical assistance in the next season to operate a potentially profitable business (see an analysis of the trade-offs in MCCs in Annex 8).

19. **Sub-Component 1.2. Improvement to Horticulture Practices.** Three rounds of co-financing since the last SM, resulted in 189 farmers spanning 1,300 da of land accepted for new orchard financing and 98 applications for greenhouses to be built in 2017. In Posof, four orchards of 20 da and four 200 m² greenhouses were demonstrated, but calls for co-financing resulted in only one greenhouse application. Five open-field demonstrations of strawberry production in Ardanuc and Artvin were established and calls for co-financing were done in autumn 2016 for establishment in early 2017. Blueberry demonstrations were completed on 7.6 da for four farmers in Artvin and a co-financing program may be launched for 2017. AKADP had not demonstrated plastic tunnels as a potential lower-cost alternative to greenhouses for production of off-season vegetables nor had it developed any good agriculture practices with project farmers as originally envisaged.

20. The orchard demonstrations visited during the mission in Kars and Ardahan were of poor quality: lay-outs were poorly designed; weed-infested, and drip irrigation lines were blocked; some water pumping systems were not understood and several fertigation systems not in use. About half the cost was expended in overly-elaborate border fences. Orchards (mulberries, walnuts) and vineyards visited in Yusefeli district were better established - these were well-constructed, cost-effective for smallholders, and managed efficiently. Specialist technical support will become imperative next year, as the number of farmers for co-financing peaks and becomes a major activity for district teams.

21. Greenhouse demonstrations were of high quality, and vegetable productivity was providing high returns to beneficiaries. The mission visited greenhouse sites which ranged between 200-500 m², and owners produced 2-4 crops per year. Only farmers in Ardanuc had received training on growing greenhouse vegetables. All farmers reported no problems selling vegetables locally, as about 70-80 percent of local supplies were imported.

22. **Sub-Output 1.3. Non-farm Enterprise Investments.** Minimal progress was made in diversifying non-farm enterprise investments during the review period including the rural tourism initiative. AKADP provided 40 demonstration family greenhouses (48 m²) targeted at women, for household consumption. The mission visited one greenhouse in Sulakyurt, which was not functional. Henceforth, and to ensure ownership, the project **should discontinue family greenhouse demonstrations** and only consider co-financing applications.

23. The Artvin business initiative for six workshops for some 20 women to produce grape juice under hygienic conditions is promising. Young people could be included in training where they could learn skills such as pruning, drip irrigation and develop as service providers.

Agreed action	Responsibility	Agreed date
Targeted distribution of fodder seed to smallholders; expansion to districts without fodder seed distribution	PMU	Spring 2017
Rehabilitation of existing smallholder barns	PMU/MFAL	January 2017
Demonstration of safe construction and operation of silage pits suitable for smallholders	PMU/MFAL	Spring 2017
Support transport and targeted technical assistance for MCC	PMU	January 2017
Training and assistance by experts to orchardists and vineyards – demonstrations and co-financing	PMU/MFAL	December 2016
Greenhouse vegetable production training to farmers entering co-financing for new greenhouses	PMU/MFAL	Spring 2017
Discontinue family greenhouse demonstration and only consider co-financing applications.		Immediate
Plan entrepreneurship development trainings	PMU/MFAL	January 2017

Component 2 – Village Infrastructure Investments (USD 10.37 million)

(Rating: Moderately Satisfactory)

24. **Sub-Component 2.1: Establishment of livestock markets.** The project design identified a lack of livestock markets as a bottleneck to sector development. The construction of the largest project investment, the Ardahan livestock market, was completed in July 2015. The design, review, approval and procurement process for construction works was completed for livestock markets at

Ardanuç (Artvin), Sarıkamış (Kars), Posof (Ardahan) and upgrading an existing market in Hanak (Ardahan). The livestock market at Selim (Kars) built in 2011, will be upgraded to make it compliant with recent regulations (see Table 1 below). However, as discussed by the mission with municipal officials responsible for managing these facilities, none of the markets have established provisions for proper management, operations and maintenance for self-sufficiency. It is urgent for the PMU to work with local administrations as well as the private sector to ensure animal health measures such as waste disposal are part of the operational plans for these markets and realistic arrangements are made for their implementation.

25. Sub-Component 2.2: Development of livestock water supply facilities. Given the topographic conditions of upland range lands where livestock graze during summer, easy access to drinking water is often a problem. Building conveyance systems and troughs is therefore in high demand, and the project constructed a number of LWF through SPAs. The mission confirmed the importance of these facilities and the positive impact reported by beneficiaries and Provincial Directorate Administration (PDA) staff. They highlighted the increased weight gain by livestock. SPAs have identified additional locations where LWF are on demand and those request should be carefully considered during the preparation of the 2017 AWPB taking into account the limited implementation period available.

26. Sub-Component 2.3: Rehabilitation and construction of pasture roads. During summer months, herders take livestock to upland pastures for approximately four months. They transport milk daily to markets with considerable losses in quantity and quality. Project design included support to construct new roads or improve those existing. Throughout implementation this has been an important activity in all three provinces conducted through SPAs. This activity is appreciated by stakeholders, as confirmed by the mission, and explained by beneficiaries using these roads. During preparation of the 2017 AWPB, the rehabilitation and construction of pasture roads should be prioritised in areas where Component 1 is active.

	Livestock Markets	Pasture roads	Livestock Water Facilities
Units built	1 completed 5 contracted in 10/2016	74 km	68 troughs
Location	Ardahan 3 Kars 2 Artvin 1	Ardahan (17 km) Kars (22 km) Artvin (35 km)	Ardahan Kars Artvin
Beneficiaries	All livestock growers in the three provinces	29 villages 3 423 HHs 20 421 cattle 13 000 small ruminants	14 villages 1 458 HHs 26 000 cattle

Table 1. Main infrastructure built by the project (Source: 2015 RIMS, 10/2016 Project Progress Report and M&E Database)

27. Sub-Component 2.4: Rehabilitation and construction of livestock facilities. Cattle Handling Facilities that allowed systematic targeting for animal health improvement were piloted by the project. The mission was informed about recent stealing of livestock in the area and some farmers were wary of using these facilities as they perceive these could be easy targets for cattle theft. The mission visited the livestock handling facility in Sulakyurt district - these yards were of poor quality and falling apart. The mission discussed with the PMU the need to improve the quality of construction and maintenance of these facilities.

28. Other village infrastructure: Construction of shepherd shelters in upland pastures. The 2016 AWPB included 20 shepherds' shelters. However, delays in design preparation and approval and in the procurement process resulted in contracts only being ready for the facilities to be built in spring 2017.

29. Improved Off-farm Irrigation: The project design considered investing in off-farm piped networks for irrigation, however, only one system has been identified in Artvin. The project should identify further opportunities for investing in improving existing irrigation systems or developing new systems if studies have been conducted, so that tendering can be carried out before April 2017 otherwise, it would be too late if construction is to be completed by September 2017.

Agreed action	Responsibility	Agreed date
Development of specific management, operation and maintenance plans for each of the livestock markets	MFAL	March 2017
Identify the best LWF to be included in the next AWPB	SPA	December 2016
Conduct a detailed geo-physical study of potential areas and design and construct a solar-powered pump cum well system	PMU	June 2017
The rehabilitation and construction of pasture roads should be prioritised in those areas where Component 1 is active	MFAL	January 2017
Identify opportunities for investing in improving existing irrigation systems or developing new ones where studies have already been conducted	SPAs	By May 2017

30. **Quality of Civil Works and Supervision:** The mission considers the quality of civil works of the Ardahan LSM completed in July 2015 to be adequate with only minor shortcomings already identified by PMU. However, supervision arrangements for on-going works and for works carried out by SPAs are not adequate. Site supervision currently provided is limited given the fact that PMU has only two engineers performing several tasks. Likewise, the SPAs have limited staff to perform proper site supervision of civil works. At the time of the mission, the PMU was in the final stages of engaging a consultant to perform on-site supervision for on-going civil works. As part of the 2017 (AWPB) works that will be carried out by SPAs, the project should make more emphasis on proper supervision arrangements.

C. Project implementation progress

31. **Project Management Performance (Rating: Moderately Unsatisfactory).** Following the last SM of May 2015, the Regional Administrator based in Kars resigned and the position remained vacant for five months. The project is being implemented by a UNDP-hired team led by the new Regional Administrator and composed of two engineers, one agro-economist, two agronomist and one procurement and finance officer, currently on maternity leave until January 2017. At the time of this mission, there was no M&E Officer and a gap in field procurement officer. The lack of staff in these key positions greatly hampers the capacity of PMU to implement the project and puts at risk the implementation of the 2017 AWPB and the preparation of the valuable data in view of project completion. In addition to this team, a number of staff have been assigned to the project on a part or full time basis from the PDA of the three provinces participating in the project.

32. The Externally-Funded Project Group of MFAL is admittedly understaffed with a total of 5 people managing three large projects. Staff deficiencies in these two groups above, partly explain the lack of proper follow up to a number of recommendations made by several previous missions, including those regarding the importance and urgency to establish a proper M&E system and hire a dedicated staff to implement it and maintain it. It is the mission's opinion that UNDP could have been more proactive in addressing the staffing and operational gaps (in particular M&E) which consequently, have hampered the project's timely delivery of some activities.

33. The Project Steering Committee meets twice a year shortly before the AWPB workshop and in summer time. This arrangement is inadequate to allow its members to understand project issues and provide proper guidance. This feeds through to limited oversight and guidance to PMU for implementation of project activities and alignment with the AWPB.

34. **Coherence between AWPB & Implementation** (rating: moderately unsatisfactory): The total amount of payments, including the contributions of the Government and the beneficiaries for the AWPB 2015, including payments effected in 2016 is USD 4.4 million representing 65% of the planned amount. Payments to the AWPB 2016 as at October 31, 2016 are low at only USD2.1 million, representing 48% of the USD 4.4 million planned for the year. The execution of the 2016 AWPB shows progress and over-achievement in some activities, namely, increase in area under improved forage crops, number of orchards and greenhouses and training activities. While works implemented through SPAs advance, the short construction season of four months, compounded by the late finalisation of procurement processes, has meant delays in building roads and Livestock Water

Facilities (LWF) in uplands this year. Likewise, the long approval and procurement process resulted in the contract for the construction of the additional livestock markets, being signed only in October, with a limited possibility of carrying out field works during 2016 due to the on-set of the winter season.

35. At the time of the mission, the 2017 AWPB had not yet been drafted. However, there were on-going preparations for the annual workshop with project stakeholders where all of them were expected to arrive with proposals that will then be discussed, prioritised and agreed. The workshop is planned for early December. The mission noticed the lack of clear guidance to stakeholders for the preparation of proposals for the 2017 AWPB.

36. **Monitoring and Evaluation (Rating: Unsatisfactory).** Following the 2015 supervision mission's recommendation to hire two M&E Officers, two vacancy announcements were unsuccessful due to the lack of qualified candidates and the function has remained temporarily assigned to the Procurement and Finance Officer based in Kars (currently on maternity since August 2016). A workshop facilitated by IFAD was organized in December 2015 with the PMU, MFAL, DDAs and PDAs staff to revise the logical framework and redefine the list of indicators. It was observed that annual progress reports are of limited use since they contain only descriptive output progress, failing to report on achievements against the indicators and targets of the log-frame and lacking explanations for under-achievement. Furthermore, the database created in 2015 by the previous Regional Administrator is only partially kept up to date, with limited key variables and data coverage, hampering its use and effectiveness. Similarly, the post-investment satisfaction surveys adopted by the PMU in 2014 are lacking depth in the questions addressed and are not systematically carried out, begging the question on their actual usefulness and value added. Overall, the mission concluded that no M&E tool is being used to inform decision-making to guide implementation or generate knowledge.

37. It is the mission's assessment that the M&E capacity and quality remains limited at a crucial phase where impact and results measurement are a priority. Appropriate M&E tools have not been developed nor have basic data and statistics been maintained throughout the project. In this regard, the mission urged the project to start immediately the selection of a consultancy² to be based in Kars Project Unit to carry out M&E functions till project completion.

38. **Impact assessment.** The project conducted a comprehensive Baseline Survey with quality criteria matching the indicators of the log-frame. The PMU should conduct the impact assessment survey latest by July 2017 in order to provide information during the Project completion mission scheduled for November 2017. Therefore, these services should be procured latest by end of February 2017.

39. **Gender focus (Rating: Moderately Satisfactory)** Gender continues being factored into all investment selection criteria with the assignment of a higher score to female beneficiaries during the application selection. Over the last year, activities like grant-based family-type greenhouses for self-consumption have been introduced targeting exclusively women beneficiaries. Despite emerging evidence on the relevance and potential good impact of certain activities, as of 31 October 2016, cumulative data show overall limited involvement of women as project direct beneficiaries³: 7,000 beneficiaries from rural infrastructure (17% women); 103 women trained in livestock and horticulture (18% ratio); 18 orchard and greenhouses (6% women); forage seeds distribution (1.5%). Field visits confirmed the high relevance and interest of activities such as greenhouse production (under co-financing) for women where there is a high potential of improving nutrition, particularly as they live in mountain areas where horticulture practices are limited due to weather conditions. This activity has attracted the interest of females, however, their limited land ownership is a hurdle for their access to co-financing. The mission recommends the PMU to engage more actively in: i) promotion of land leasing as an alternative option to land ownership, and ii) the establishment of women cooperatives, both with the aim of increasing gender outreach, and ultimately household income and women economic empowerment.

40. **Youth.** As identified at design, the project should address the needs of the rural younger populations, heavily out-migrating from the project area, by providing examples of productivity and profitability in local rural activities and providing opportunities to enhance professionalism and motivation of staff working in relatively isolated regions. Notably, most project investments are addressed to the younger segment of the population through the adoption of a selection criteria which prioritizes activities for beneficiaries between 24-45 years of age. While young people show interest in farming activities, similarly to women, their involvement in project investments remains limited as

2 Possibly from an institution which could also offer the appropriate expertise to carry out the impact survey.

3 With exception of (40) family-type greenhouses which are by definition exclusively for women beneficiaries.

challenged by their limited access to assets, such as land and livestock. The mission recommends the project to be more proactive in involving younger farmers e.g. through the promotion of land leasing as an alternative to landownership.

41. **Effectiveness of targeting approach and poverty focus (Moderately satisfactory).** The AKADP's targeting strategy combines a demand-driven modality with geographic targeting, self-targeting in terms of the types of Project benefits available and direct targeting, i.e. application of eligibility criteria as defined in the PIM.

42. At the end of 2014, given the increasing demand for project services coming from non-selected project villages and project low disbursement, it was decided to include all villages from 13 selected districts bringing the number of villages up to 597 (from 160 as per appraisal) with a total target population of 397 387, or around 100 000 HHs. As of 31 October 2016, approximately 25 000 HHs have directly benefitted from project activities; the geographic expansion is considered as an increase in eligible villages rather than increased targets.

43. During the mission, a sample economic analysis⁴ of beneficiaries' land and/or livestock assets was conducted to ascertain the pro-poor focus of the project. Results show the project has focused predominantly on the more economical active farmers and less on the poorer segments of the population. In order to improve the pro-poor targeting focus of the project, it is recommended that in 2017 MFAL targets farmers with lower land and livestock assets, as defined at appraisal.

44. The mission received a request by Ardahan PDFAL to include the district of Damal located in one of the most remote areas of the province which, according to poverty data received by MFAL, meets project eligibility criteria. Therefore, the mission recommends that the district of Damal be included in the 2017 AWPB with an emphasis on including realistic activities given the limited remaining implementation period.

45. **Innovation and learning (Rating: Moderately Satisfactory).** The mission confirmed certain innovations suitable for replication and scaling-up. Greenhouses allow smallholders to switch from growing wheat to more intensive production of high value crops; innovative vineyard designs with durable materials, require less maintenance and allow easy expansion; introduction of high quality fodder seed into rotations for farmers reporting increased fodder production; promotion of silage production complements fodder interventions. PMU was less innovative in Component 2: a proposal to use biogas plants to deal with waste at LSMs and reduce energy requirements and piloting solar-powered pumps LWFs in upland pastures, which would be both innovations, are still to materialise.

46. Despite these innovations, the project did not conduct systematic data collection to document outcomes and impact on smallholders, to disseminate knowledge and share results to enhance replication and scaling up. Nonetheless, some effort has been deployed in producing a film for the promotion of project activities. In addition, Kars PDA staff and 'Milk producers' and 'Livestock Breeders' Associations jointly organized a symposium in July 2016. Further learning is expected from next year's impact survey and stakeholders' workshop.

47. **Training.** As of 31 October 2016, 103 female beneficiaries (18% of total) and 456 male were trained in horticulture and livestock production. Interactions during the field visits indicated that some of the trainings offered, particularly for livestock management, fall short of the expected quality by beneficiaries. In this respect, previous supervisions have often commented on the need to enhance P/DDFAL staff skills on specific topics related to project activities; however the recommendations have not been adequately addressed. The PMU should organise training for P/DDFAL on key project activities such as orchard establishment and maintenance, livestock husbandry, irrigation scheduling, fertigation and preparation of farmers' business proposals⁵.

48. **Climate and Environmental Focus (Rating: Moderately Satisfactory).** The project promotes environmentally-friendly practices such as intensive orchards and vineyards with drip irrigation, fertigation and mulching that reduce extensive exploitation of natural resources by increasing productivity and resource utilization. Pasture roads and livestock watering facilities help reduce soil

4 The sample included 1 district per each province. The analysis showed: 96 farmers in Yusufeli District (Artvin) representing 62% of provincial beneficiaries owning on average of 1.45 ha; 44 farmers in Ardahan Central District (Ardahan) representing 55% of the total provincial beneficiaries possessing on average 8.7 ha and 32 livestock; 55 farmers Kazigman District (Kars) representing 12% of provincial total beneficiaries owning on average 1.9 ha.

5 The mission recommends the use of RuralInvest a tool available in Turkish language, that support the preparation of sound rural development farmers' investments. FAO has trained MFAL staff in the past and they could support this training. For more information on this tool, please see: <http://www.fao.org/investment/ruralinvest/en/>

erosion and degradation of upland grasslands. Hydrological studies will inform the location of new livestock watering facilities to be built during 2017 that utilise solar-powered pumping from shallow aquifers. The location of some of the livestock markets raised environmental concerns, particularly as some sites are located close to natural waterways. Proper handling of slurry and storm-water runoff from markets is imperative.

49. **Partnerships.** The project has established partnerships with the Kars Dairy Association and the Ardahan Breeders Association for owning and operating four milk collection centres. These associations provide other services to members, and will continue to exist following completion of the project. There is a need however, to establish additional partnerships, in particular with the private sector to improve financial sustainability of some assets such as support to municipalities owning project-built livestock markets, in identifying mechanisms to include the private sector in the provision of services to facilitate the management, operation and maintenance of these facilities.

Agreed action	Responsibility	Agreed date
Include the district of Damal in the 2017 AWPB	MFAL/PMU	December 2016
Give more emphasis to deliver services to farmers with lower land and livestock assets, as defined at appraisal in the preparing the 2017 AWPB.	MFAL/PMU	December 2016
Develop mechanisms to establish partnerships with private sector to manage, operate and maintain LSM	MFAL	May 2017
Hire consultancy services based in in Kars to carry out the M&E functions	MFAL	January 2017
Draft TORs for project impact assessment	MFAL/PMU	January 2017
Prepare a focused technical training programme for PDA/DDA staff	PMU	January 2017

D. Fiduciary aspects

50. **Financial Management (Rating: Moderately Satisfactory).** A FM assessment was conducted to review the adequacy of the arrangements in place by the Project. The project is implemented by the MFAL, through a PMU based in Kars PDFAL. A service agreement signed between MFAL and UNDP specifies that the latter administrates funds and supports the project in dealing with flow of funds, procurement and recruitment of PMU staff. The PMU includes six full-time staff, at the UNDP country office four part time staff assisting the project at UNDP level in Ankara and a finance staff partially in charge of project at MFAL level. The level of staffing is adequate for Finance and Accounting.

51. Project Implementation Manual (PIM) was first approved by IFAD in 2010 and later updated in February 2015. The MFAL prepares its annual budget and submits it to the Ministry of Development. PMU and MFAL prepare an AWPB for the activities of the following year and submits it for approval IFAD. The Project has one designated account (DA) in USD opened at the Central Bank of Turkey, one project account (PA \$) in USD, opened at Bank of America and one project bank account (PA TL) in TL, opened at Garanti bank. The payment process starts with technical approval at PMU level, after which, documents have to be reviewed by the procurement and finance assistant and approved by the PMU Regional Administrator. All transactions are to be approved by MFAL and UNDP and only then a bank transfer is issued.

52. The total amount of commitments as of October 31, 2016 is USD 4,1 million, financed by IFAD loan (USD 3,9 million) and the beneficiaries (USD 0.2 million) and represents 30% of the total project cost. The total amount of actual expenditures as of October 31, 2016 is USD 13,1 million, financed by IFAD loan (USD 9,3 million), MFAL (USD 2.5 million) and the beneficiaries (USD 1,3 million). It represents 49% of the total funds allocated for the project, which is low for a project in its 6th year of implementation.

53. The total amount of payments, including the contributions of the Government and the beneficiaries for the AWPB 2015, including payments effected in 2016 is USD 4.4 million representing 65% of the planned amount. Payments to the AWPB 2016 as at October 31, 2016 are low at only USD2.1 million, representing 48% of the USD 4.4 million planned for the year. The budget allocated for 2017 of 19.0 million TL (equivalent to USD 6.1 million, Nov. 2016 UN operational exchange rate of 3.1145 TL/USD).

54. The project accounting is held on the Atlas (management information system) software, used by UNDP. The PMU records the financial information in the Planner recording system, developed by

IFAD. The data is systematically cross-referenced between the two systems. The Atlas software does not automatically produce the financial statements. The AKADP financial reports are produced on Excel sheets by UNDP, who extracts the information from Atlas software and prepares payments statements by category, by component and by funding source. MFAL prepares a statement of sources and uses of funds, a statement of cumulative investments and a statement of the designated account reconciliation. The mission recommends to prepare a statement of commitments by component, category and by financier each semester, each year and cumulative, since the beginning of the project. The Provincial Directorate of the Ministry of Food, Agriculture and Livestock (PDFAL) maintains information of all assets provided by the project in each Province on a fixed assets register.

55. **Disbursements on loan to designated accounts (Rating: Unsatisfactory).** As of October 31, 2016, two withdrawal applications (WAs) had been processed in 2015 and 2016 (WA 10 to WA 11) from the IFAD loan for a total of USD3,1 million, for the replenishment of the designated account. As of the same date, 61% (SDR 7,4 million), equivalent to USD 10.7 million of the total funds allocated for the project have been disbursed. The difference between the disbursements and the actual expenditures (USD 1,4 million) represents the balance of the designated and the two project accounts. The mission reviewed the salaries of October 2015 and July 2016 and found the amounts have been submitted to IFAD for No Objection these were found to be satisfactory.

56. **Counterpart funds (Rating: Moderately Satisfactory).** The Government of Turkey contributes financing in cash and in kind to cover the tax exemption and MFAL and PDFAL staff cost. The MFAL is fully financing from its own budget some projects activities (Component 1) that were initially budgeted to be financed by the loan but later the budget was not allocated by the Ministry of Development. The financial statements include the payments done by the MFAL and the tax exemption, but it does not include the MFAL and PDFAL staff cost. As of October 31, 2016, USD 2,5 million had been allocated, representing 77% of the total amount to be disbursed by the MFAL budget to pay its contribution, which was USD 3.2 million at appraisal. To date, the beneficiaries have disbursed a total of USD 1.3 million, equivalent to 33% of their commitment (USD 4.0 million at appraisal)..

57. **Audit (Rating: Satisfactory).** The project is audited by the Treasury Controller under cabinet of the Prime Minister. The audit report for the fiscal year 2015 has been submitted to IFAD. The mission reviewed it and notes that the audit resulted with an unqualified opinion and no weaknesses in internal control. Thus, it is not required to issue a separate management letter. At UNDP level, there is an internal audit department and the financed project-related transactions are subjected to their regular review, which occurs every four or five years when an internal auditor from HQ proceeds to the audit of UNDP office in Ankara. The payments from project bank accounts are also subject to UNDP internal control procedures. The project is audited yearly by the external auditor.

58. **Procurement (Rating: Moderately Satisfactory).** The procurement procedures are subject to three control levels done by the PMU, the MFAL and the UNDP. It is the mission's assessment that in general, goods, works and services financed by IFAD have been procured in accordance with the financing agreement and IFAD rules and procedures. In particular, the mission appreciates the functioning and proficient results from outsourcing of tendering and site supervision for low risk/low complexity procurement of works (mainly for LWFs and pasture roads) to SPAs using national procurement procedures.

59. Regarding "Community Participation Procurement", the mission encouraged the project to keep providing procurement support, control and guidance services to the beneficiaries as it has been the case in earlier community-related procurements. The project's co-financing manual is deemed comprehensive. Nonetheless, the mission noticed the absence of indication on the bid opening and evaluation committee's composition in the purchase process led by associations. The mission recommends the committee to have one representative from each of the following stakeholders: PDFAL, DFAL, association, PMU (with procurement expertise) plus one technical advisor with knowledge relevant to the goods or works being procured. The purchase process for individual farmers should remain the same.

60. Automatically generated by "Planner" from the AWPB, the procurement plan is very detailed and accurate. For the sake of clarity, the mission recommends to display the association of the related category of expenditure to each activity to be procured. International Competitive Bidding (ICB), National Competitive Bidding (NCB) and Local Shopping (LS) methods have been used in compliance with the IFAD's procurement guidelines. The mission noticed that following the UNDP procedures, the tender advertisements are published in Turkish and English. However, in case of goods purchases, the specifications are only available in Turkish for NCB and LS. When a request is received from

bidders for technical specifications in English, UNDP provides them. In order to complement the Contract registry held in UNDP, the PMU prepares detailed tables for SPA contracts and for matching grant contracts.

Agreed action	Responsibility	Agreed date
Prepare every six months, in addition to the other financial tables, a statement of commitments (signed contracts) by component, category and by financier for the semester, the year and cumulative since the beginning of the project.	PMU/UNDP	Starting from December 2016
Keep an updated registry of contract to be submitted to IFAD along the project's progress report twice a year.	UNDP	Immediate
Update the bidding document for NCB and LS on goods by adding a reference on the availability of translated specifications in English.	UNDP	Immediate
The PMU to consolidate its contract registry related to matching grants with the above-listed information and translate it into English.	PMU	December 2016
Review the reallocation of loan by category given the deviation between the appraisal and current exchange rate USD/SDR.	IFAD/MFAL/PMU	December 2016

E. Sustainability

61. Institutional sustainability (Moderately Unsatisfactory). The project design considered that it was necessary to have UNDP to provide project management services and these functions would be gradually transferred to MFAL. The mission was unable to confirm that this process is taking place at any rate, as the MFAL continues to heavily rely on the UNDP support. The mission witnessed the strong ownership of both the PDFAL and the DDFAL. Being these offices at the forefront of the project implementation and having seen the close contact their staff maintains with the local communities, the mission believes that they will continue to provide support for the technologies/assets provided and introduced through the project.

62. Social sustainability - Empowerment (Moderately Satisfactory). The co-financing initiatives coupled with extension and training services at village level, increased asset ownership, rural household's empowerment and ultimately the likelihood of social sustainability. Indeed, participation in the co-financed activities implies land use/renting, cost-share of necessary equipment and workforce related in-kind provision. Similarly, larger infrastructure such as sewerage systems and livestock markets imply a broader inclusion at village level.

63. Economic and financial sustainability (Moderately Unsatisfactory). The mission made a simplified analysis of several project interventions. While more details can be found in Appendix 8, it had a positive assessment of the support to greenhouses, forage crops, pasture roads and livestock drinking facilities in all three provinces and of orchards in Artvin province. At the same time, the analysis was negative for the project activities related to barn construction, orchards in Ardahan and Kars provinces and the livestock handling facilities, while it was inconclusive in the assessment of livestock markets and the milk collection centres, mostly due to lack of data and uncertainty on their impact as they are yet to be fully operational.

64. Technical sustainability (Moderately Satisfactory). While responsibility for maintenance requirements of livestock water facilities in upland regions and pasture roads are clearly assigned, arrangements for management, operation and maintenance of livestock markets constructed by the project are vague at best and the facilities may become a burden to local municipalities if they are not clarified before they are handed over. Uptake of fodder cropping, silage making, greenhouses, orchards and vineyards are sustainable due to the high income generated from these activities for co-financing investors. Milk collection centres remain non-operational and therefore, their sustainability is unknown.

65. Responsiveness of service providers (Moderately Satisfactory). The main service provider to the project is the SPAs, through whom the design and construction of pasture roads and LWF is conducted. The relationship between the project and the SPAs has proved mutually beneficial and the SPAs are very responsive to attend the requests of the project as there is a clear alignment of mandate of the SPAs and the project's overall objectives. Until the time of the mission, according to the Register of Contracts, the project had signed 52 contracts. Only one of them, related to the cattle

handling facilities was problematic and due to poor performance and quality of materials and works, it will be terminated.

66. Scaling-up and replication (Moderately Satisfactory). Cost-effective, income generation activities are being effectively scaled-up and replicated through project co-financing (commercial greenhouses, orchards, vineyards, fodder production) with the largest co-financing program occurring during the last year. Family greenhouses were not replicated in project areas beyond demonstrations. The semi-open barns proposed by the project were not scaled-up as they proved expensive and unpopular with target beneficiaries.

67. Environmental sustainability (Moderately Satisfactory). The practices and technologies introduced by the project enhance environmental sustainability and help farmers be more resilient to natural disasters such as droughts. A number of improved technologies were introduced making agriculture more environmentally-friendly and protecting natural resources by increasing productivity. The mission stressed the importance of developing proper plans for waste management produced by livestock markets, especially as some of them are located close to natural water courses.

68. Exit strategy (Unsatisfactory). The project has yet to develop an exit strategy to guarantee the stability and sustainability of the interventions carried out. The mission reiterated the need to focus the last AWPB on interventions linked and in support of those already done. Such is the case of the pasture roads, which need to focus in those areas where Component 1 has undertaken actions. Likewise, the mission requested that management, operation and maintenance plans are developed jointly with all the beneficiaries that have received assets to guarantee they have a good understanding not only of how to operate them but also consider the opportunities to involve private sector in the management of some of them (i.e. livestock market facilities and milk collection centres).

Agreed action	Responsibility	Agreed date
UNDP to work closely with MFAL to initiate transferring some project management functions as foreseen in the Project Design	UNDP/MFAL	Immediate
Development of specific management, operation and maintenance plans for each of the livestock markets	MFAL	1 March 2017
Use economic and financial criteria to prioritise interventions to be included in the 2017 AWPB	PMU/MFAL	December 2016
Develop a sound Exit Strategy to ensure sustainability of project achievements	PMU/MFAL	January 2017

F. Impact

69. Physical and financial assets (Moderately Satisfactory). Co-financing expanded outreach of fixed assets among smallholders, who are now gaining benefits of such investments (e.g. greenhouses and silage machinery). Other asset investments, such as orchards, will increase benefits over the next few years as trees mature and bear commercial volumes of produce. Pasture roads, livestock water facilities and livestock markets were found effective in targeting large numbers of smallholders. Many farmers were excluded from asset co-financing because they considered their proposed contributions were too high, (e.g. barns) relative to their perceived returns from that asset, or simply because they could not afford their contribution. Interventions such as plastic tunnels, rehabilitation of small-sized barns and silage pits would more effectively target smallholders, with assets more suited to their investment capacity.

70. The project supported a local machinery manufacturer to provide lower cost/capacity silage machinery more suited to smallholders. The four cold milk collection centres in partnership with two producer associations remained non-operational but are expected to initiate activities in spring 2017. The main weaknesses are the lack of buy-in from the private sector and a lack of scale to be a substantial player in milk distribution.

71. Food security (Moderately Satisfactory). The focus on food security waned following the previous IFAD mission with more emphasis on increased incomes for smallholders. Demonstrations of family greenhouses targeting women often overlooked follow-up support for beneficiaries to gain maximum benefits from production of nutritious fresh vegetables to supplement household diets. AKADP supported six workshops for women to process grape juice and produce traditional food products in more hygienic conditions to supplement household diets.

72. Increase in incomes (Moderately Satisfactory). Project interventions have delivered increased incomes for beneficiaries across the livestock and horticulture interventions. Successful

adaptation of high quality fodder conservation practices means less drop in cattle condition during the enforced winter enclosure, and cattle are in better condition to calve and begin milk production in spring, which has boosted annual milk yields and income from surplus fodder sales. Beneficiaries of greenhouse co-financing responded to local market demands for fresh produce to become more productive on their small plots growing 2-4 vegetable crops per annum. Orchards and vineyards will similarly become major income generators for smallholders over the next few years as plants mature and become commercially productive.

73. **Policy impact.** MFAL investment in milk collection centres in the project districts is based on the Ministerial decree (2015) which bans transportation of un-chilled fresh milk. This decree is more relevant to fresh milk markets than for cheese processing as in project areas. The decree helped transform the milk industry in other dairy areas of Turkey, and may have a similar transformative effect on in project areas over the longer term. The project has potential to impact policy through case studies of successful interventions such as improved forage production and conservation, improved access to uplands and water facilities for livestock.

74. **Other impacts.** The government's promotion of hydro-electricity will impact Yusufeli district in Arvin, as low lying areas, including Yusufeli Township, will be flooded once a new dam nearby is completed. DDA were utilising project resources to support more intense, higher value cropping in higher altitude areas of the district in preparation of farming households being displaced by rising water levels.

Agreed action	Responsibility	Agreed date
Include more pro-poor technologies and interventions in the 2017 AWPB using the entire range of technologies proposed during Project Design.	PMU/MFAL	December 2016
Provide targeted specialist technical assistance to the cold milk collection centres to ensure they initiate activities properly during the 2017 season.	PMU/MFAL	January 2017
During the preparation of the Project Completion Report, include the elaboration of case studies aiming at drawing insights to inform sectorial policies, focusing on areas of proven success.	PMU/MFAL	July 2017

G. Conclusion

75. Project implementation performance during the last reporting period has decreased. The absence of a Regional Administrator for five months in 2015 as well as the currently unmanned M&E, procurement and finance positions, affected project delivery. The overall turnover of staff at both the PMU maintained by UNDP and the Externally-Funded Project Group of MFAL negatively affected project implementation and decreased coherence due to limited institutional memory. The total project expenditures of 2016 are expected to be lower than that of the previous two years. There was insufficient follow-up to the recommendations of the previous supervision mission. There are sustainability risks for the assets and systems established by the project due to the lack of clear management, operation and maintenance plans. The lack of a proper M&E system hampers the possibility of using project generated information as a decision-making tool to improve project implementation. The mission recommends once more, as previous missions have done, to recruit an M&E consultant as soon as possible. This recommendation considers the fact that the project completion date is only 10 months away and PMU will need to place additional emphasis on properly designing the impact assessment of the project (by February 2017), conducting the assessment (within September 2017) feeding into the project completion report (PCR) which should be prepared by September 2017 and completed by December 2017 for the closing of the project.

76. The mission recommends that the 2017 AWPB, which is the last one of the project's life, emphasise the activities that have proven successful, for which there is high demand and that target poorer beneficiaries. Given the limited time available for actual project implementation, there is need for a prompt and sustained boost to project management by both MFAL and UNDP if the project is to successfully implement the 2017 AWPB with its largest ever budget.

Appendix 1: Summary of project status and ratings

Basic Facts

Country	Turkey	Project ID	1492 [1100001492]	Loan/DSF/Grant/ASAP FI No.	1000003637
Project	Ardahan-Kars-Artvin Development Project			Top-up Loan/DSF/Grant/ASAP FI No.	
Date of Update					
Supervising Inst.	IFAD				
No. of Supervisions	5	No. of Implementation Support/Follow-up missions	4		
Last Supervision	18-Nov-2015	Last Implementation Support/Follow-up mission	08-Dec-2015		

USD million Disb. rate %

Approval	17-Dec-2009			Total financing	26.41	
Agreement	12-Apr-2010	Effectiveness lag		IFAD Total	19.20	
Entry into force	02-Jul-2010	PAR value	-----	IFAD loan	19.20	61
First disbursement	06-Dec-2010			DSF grant		
MTR		Last amendment		IFAD grant		
Original completion	30-Sep-2015	Last audit	01-Jul-2016	ASAP grant	0.00	0
Current completion	30-Sep-2017			Domestic Total	7.21	
Current closing	31-Mar-2018			Beneficiaries	3.99	33
No. of extensions	2			National Govern	3.22	77
				External Cofinancing Total		

Project Performance Ratings

B.1 Fiduciary Aspects	Last	Current	B.2 Project implementation progress	Last	Current
1. Quality of financial management	5	4	1. Quality of project management	5	3
2. Acceptable disbursement rate	2	2	2. Performance of M&E	4	2
3. Counterpart funds	5	4	3. Coherence between AWPB & implementation	4	3
4. Compliance with financing covenants	5	4	4. Gender focus	4	4
5. Compliance with procurement	4	4	5. Poverty focus	4	4
6. Quality and timeliness of audits	5	5	6. Effectiveness of targeting approach	4	4
			7. Innovation and learning	4	4
			8. Climate and environment focus	4	4
B.3 Outputs and outcomes	Last	Current	B.4 Sustainability	Last	Current
1. Smallholder and Non-farm Enterprise Investments	4	4	1. Institution building (organizations, etc.)	4	3
2. Village Infrastructure Investments	4	4	2. Empowerment	4	4
3. Institutional Strengthening and Project Management	4	3	3. Quality of beneficiary participation	4	4
			4. Responsiveness of service providers	4	4
			5. Exit strategy (readiness and quality)	4	2
			6. Potential for scaling up and replication	4	4

B.5 Justification of ratings

B1. Disbursement Rate: while it increased over 10% in less than a year, the overall rate of 61% remains below target as the project completes its 6th implementation year. **Financial Management:** At the time of the mission there was no financial and procurement officer in the PMU located in the Kars PDFAL. **Compliance with financing covenants:** At the time of the mission financial documents and data were not provided to the mission by the PMU located in the Kars PDFAL but by UNDP in Ankara. Moreover, there was no employee of the M&E officer in the PMU located in the Kars PDFAL. The amount of AWPB 2016 is USD 4.4 million and total payments on AWPB 2016 (USD 2.1 million as of 31 October 2016) and represents 48% of the planned amount. **Procurement:** The total amount of commitments (signed contracts) as of October 31, 2016 was USD 4,1 million.

B2. Quality of Project Management: Since the last SM the project remained 5 months without Regional Administrator and at the time of the mission there was no procurement or M&E officer. The Externally Funded Projects Group of MFAL is understaffed given its responsibilities with three projects. The project Steering Committee appears to provide very limited implementation guidance. **Performance of M&E:** The database created by the previous Regional Administrator is only partially being maintained and is rapidly losing relevance. There is no systematic use of M&E data to improve decision-making by project managers.

B3. Institutional Strengthening and Project Management: There is little evidence that UNDP has started passing on project implementation responsibilities to MFAL, as envisaged to happen in the PDR towards the end of the project. There was limited follow up to recommendations from previous missions.

B4. Exit Strategy: Despite recommendations from earlier SMs to develop a project exit strategy to ensure stability and sustainability of the project's interventions no action has yet been taken. The project still needs to prepare management, operation and maintenance plans for most assets it has put in place.

Overall Assessment and Risk Profile

	Last	Current
C.1 Physical/financial assets	4	4
C.2 Food security	4	4
C.3 Quality of natural asset improvement and climate resilience	4	4
C.4 Overall implementation progress (Sections B1 and B2)	4	3

Rationale for implementation progress rating

Implementation performance can be summarized as mixed. Recognisable progress was achieved over the past two years and while some progress has been noted in the reporting period such as, establishment of greenhouses and orchards, and in civil works related to livestock markets and pasture roads, it is not at the expected level particularly as the project enters its last year of implementation. Nevertheless, the mission confirmed the positive impact of project support to improved forage production and high demand from farmers. These achievements can be considered significant in light of the serious shortcomings faced by the project since the project started, as a result of high staff turnover, compounded by the departure of the Project Regional Coordinator in May 2015. Not surprisingly, the project only spent 58.1% of budget planned in the 2015 AWPB. Notwithstanding the positive achievements, the mission noted with concern that overall Project performance during the current reporting period has decreased partly due to the absence of a Regional Administrator for five months in 2015 as well as the currently unmanned M&E, procurement and finance positions. As a result, the total project expenditures of 2016 are expected to be lower than that of the previous two years. Payments against the AWPB 2016 as at October 31, 2016 amount to USD 2.1 million, representing 48% of the USD 4.4 million planned for the year. The last supervision mission emphasized the importance of intensifying efforts on all levels and to accelerate the planned activities in the remaining months prior to the completion date.

C.5 Likelihood of achieving the development objectives (section B3 and B4)	4	4
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Rationale for development objectives rating

The project's single largest investment, the Ardahan livestock market started functioning in 2015 and it is expected that by project end, the benefits are quantifiable in terms of improved farm-gate prices for livestock, decrease in incidence of animal diseases and overall higher dynamism in the marketing of livestock in the entire region. Given the prioritization of livestock production by MFAL in the provinces covered by the project, it is expected that the recent award of the construction contract for five additional markets will also contribute significantly to the sector development and the reduction in poverty levels in the project area. Livestock and dairy production provide the main source of livelihoods in the region and the project investments in animal husbandry, coupled with support to the development of the horticultural sector, through greenhouses and modern orchards constitute a solid base to improve living conditions. The last reporting period and the previous year constitute the period of highest project disbursement, albeit from a low disbursement rate since project start. Contracts signed this year and the record budget allocation for 2017 put the project in a path of a positive performance during its last year.

C. Risks Short description of major risks for each section and their impact on achievement of development objectives and sustainability

Fiduciary aspects	While the risk of insufficient budget allocation by the government for 2017 has been eliminated by the reassurance of the Ministry of Development to have an a total of USD 6.1 million, the beneficiaries are lagging behind in terms of their relative contribution, with only 33% of their commitment at PDR, actually invested until now. There is need for careful AWPB preparation to include sufficient resources for co-financing activities while ensuring use of the resources available through the inclusion investments on village infrastructure.
Project implementation progress	The mission confirmed the readiness from SPAs and other key project's stakeholder to be pro-active immediately and during all winter in order to complete all procurement processes on time for initiating field activities as soon as it is physically possible to enter

	<p>mobilise contractors.</p>
Outputs and outcomes	<p>There is a high risk that the target number of beneficiaries remains low at project end as it is currently 25% with only one year remaining. However, if PMU takes advantage of the good partnership with SPAs, large number of beneficiaries can be reached by focusing on village infrastructure that benefits large communities.</p> <p>The milk collection centres require close follow up and provision of technical assistance during the last year to ensure that before project end not only milk collection starts but also a mechanism is found to guarantee financial sustainability over time. The risk is that if the PMU is not active enough by project end the milk collection centres are not fully operational.</p> <p>Given that livestock markets constitute the largest project's investment, it is critical that proper management, operating and maintenance plans are prepared by the project in close collaboration with the municipalities who will receive the assets once built. This is required to minimise the risk of poor services or quick infrastructure deterioration.</p>
Sustainability	<p>There is a risk for the project of not targeting enough of the farmers originally intended. To avoid these risks the project should have a very interactive process to prepare the 2017 AWPB and use the eligibility criteria more systematically with the explicit objective to include more smallholders .</p> <p>The long term sustainability of livestock markets is still unknown, particularly given the lack of analysis of the interaction among the six markets and the dynamics of buying and selling livestock within the region and beyond. The project should prepare detailed hand-over plans for the facilities to be managed with a service-oriented approach.</p>

Proposed Follow-up

Issue / Problem	Recommended Action	Timing
Lack of systematic M&E	Hire full-time M&E consultancy services	Jan.2017
Preparation for PCR	Prepare ToRs for Impact Assessment and launch the tender to contract the consulting firm	March. 2017
Need for Exit Strategy	Develop a sound Exit Strategy in consultation with major stakeholders	Spring 2017
Lack of clarity in asset management	Prepare management, operation and maintenance plans for all assets established by the project	Spring 2017

Additional observations

The above-recommendations are based on the Aide-memoire of the supervision undertaken in November 2016.

Appendix 2: Updated logical framework: Progress against objectives, outcomes and outputs

Results Hierarchy	Indicators					Means of Verification			Assumptions
	Indicators	Units of Measurement	Baseline	Current status (as of 31 st Oct 2016)	End Target	Data Sources	Frequency	Responsibility	
Project Goal: Rural poverty is reduced in the Provinces of Ardahan, Kars and Artvin	Prevalence of rural poverty in targeted Provinces, disaggregated by gender	Percentage points	Data to be extracted from national statistics	2014-2015 change in Regional Data show decrease in poverty rate from 3.7% to %3.6 End-year extracted data for 2016 proposed for consistency.	Reduction of at least 20% of rural people living on less than USD 4.30/day in targeted districts.	Secondary (Turkish Statistical Institute-TurkStat)	The status of GOAL and PDO indicators is reported two times during the project life-cycle as follows: a) Baseline; b) At completion	The Project Management Unit (PMU) is responsible to collect the secondary and primary information that is needed to report on the status of the selected Goal and PDO indicators	Macro-economic environment and policy remains conducive to investment, private sector development No deterioration in existing markets for livestock and crops and trade.
	Average HH Assets Ownership Index in targeted provinces (RIMS-Level 3)	Index (disaggregated by male and female headed HHs)	Data to be extracted from Baseline report (2011) and from national statistics This Index not used/compiled in TR. Considering different index / Statistical Data	Farmer survey for Project will be held in December and cross-checked with PDFAL/TurkSTAT data collected from the project provinces, by Dec.2016.	At least 20% of households increase asset ownership in targeted districts	Primary (Project Baseline Survey and subsequent periodic Impact Surveys) and Secondary (TurkStat)			
	Prevalence of under 5 child malnutrition in targeted provinces (RIMS-Level 3)	Percentage	- To be extracted from national statistics - Nutrition and Health Study (2010) indicates height on 0-5 age group in North-East Anatolian Region, "short" ratio value is %20. This data can be used to find the nutrition level.	National data from the Nutrition and Health Study (2016) will be used by the end of the project.	Decrease in chronic malnutrition among children below 5 years of age	Secondary (TurkStat, Ministry of Health, WHO, UNICEF, FAO, MDG/SDG reports etc.)			
Project Development Objective	Average annual income of targeted beneficiaries	TL/Year	Data to be extracted from secondary sources	Relevant regional level survey/data review planned for December 2016.	10% increase in income of targeted smallholder	Primary (Project periodic Impact			

(PDO): Increased incomes of project targeted poor rural smallholders	(disaggregated by gender)		TRA2 (Ardahan, Kars, Iğdır, Ağrı): Poorest %10 annual average income: 7.242 TL/yr; TR90 (Artvin) 8.005 TL/yr (2014 data)		producers	Surveys) and Secondary (TurkStat)			
Component 1: Smallholder and Non-Farm Enterprise Investments									
Outcome 1: Increased livestock and horticultural production and non-farm employment in project areas	Average livestock and horticulture production of targeted project beneficiaries (RIMS 2.2.2-Level 2)	Livestock: -Litres of Milk/Year	- Baseline average milk production at district level: 2.16 tons/cattle/year 12lt/cattle/day -Horticulture: greenhouse production of tomatoes, cucumber, pepper. - Horticultural production of the fruits/orchards supported under Component 1, in the project districts is a total of: 12.296 in 2010 - To be gathered from secondary sources, i.e. PDA	Milk production not yet measured. Expected by the end of 2016 (for project beneficiaries) Annual Statistics (TUIK) for 2015 calculation for the project districts: 2,8 tons/cattle/year 15,7 lt/cattle/day (TurkSTAT/PDFAL) 193 kg/0.05 da (from the PMU database) Horticultural production of the fruits/orchards supported under Component 1, in the project districts is a total of: 12.445 tons in 2015 (TurkSTAT/PDFAL) Strawberry as fruit and Sarıkamış as district in horticultural production data introduced to TurkSTAT data by 2015.	10% increase in average milk production. 20% increase in volume of horticulture produced by targeted villages	-M&E Progress Reports and periodic farmer surveys	Annually	The PMU is responsible to collect the data from the Provincial Directorates of the Ministry of Agriculture (PDA)	No major changes to agro-climatic conditions. No untreatable outbreaks of infectious disease in livestock.
	Farmers adopting recommended	Number of farmers	The baseline should be considered as	85 farmers have been trained and adopted the proposed technologies (only horticulture, Livestock data	- 25 farmers applying practices in both horticulture	Periodic farmer surveys	Annually	The PMU is responsible to manage/	

	technologies (through project training activities) (RIMS 2.2.2-Level 2)		"zero" (2012)	missing)	and livestock - Revised/proposed no: 300 (horticulture and livestock practices)	/Project assessments		conduct periodic farmer surveys/ outcome assessments.	
	Non-Farm Employment in project targeted areas (RIMS 2.5.1)	Number of new jobs generated (including job equivalent as family labour), disaggregated by province, gender, age & type of employment (part/full time)	- To be extracted from baseline report (data available) - Off-farm employment is 7% (Baseline survey,2010)	- 2 women, supported from project greenhouse demonstrations started to develop own business in local conditions. - Business/ entrepreneurship development trainings and site survey on no-farm employment status, especially for women, planned for December 2016.	Increase in employment and entrepreneurship in project targeted communities, with focus on women	- M&E Progress Reports and periodic farmer surveys	Annually	The PMU is responsible to collect the data from the PDA	
Output 1.1: Improvement of livestock husbandry practices	People trained in livestock production practices and technologies (RIMS 1.2.3-Level 1)	Number of trainees, disaggregated by province, gender, topic and type of training (e.g. study visits, workshops)	Zero (2012)	355 as of 31.12.2015 +27 in 2016 Total : 382 (Oct. 2016)	To be defined by PMU based on PDR figures and AWPB projections 500 beneficiaries	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA and project Service Providers (SPs)	
	Households/ People benefitting from capital assets and equipment provided by the project	Number of people, disaggregated by province, gender, and type of assets/equipment.	Zero (2012)	3 Barns constructed and operating. 3 in project development process.	-800 farmers using newly constructed hay shelters (PDR) - Other targets are to be defined by PMU based on AWPB projections. - Updated final target: Increase in the number of HH benefiting from newly constructed capital	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA and SPs	

					investments				
Output 1.2: Improvement of horticultural practices	People trained in crop production practices and technologies (RIMS 1.2.2-Level 1)	Number of trainees, disaggregated by province, gender, topic and type of training	Zero (2012)	160 farmers total as of 31.12.2015 +37 in 2016 Total: 197	To be defined by PMU based on PDR figures and AWPB projections 300 beneficiaries	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA and SPs	
	Establishment of co-financed orchards in project areas	Number and extension (hectares) of new orchards, by province.	Zero (2012)	217 farmers, 1775 decars completed as of July 2016. +100 to be completed by end of 2016	To be defined by PMU based on PDR figures and AWPB projections - 250 producer 1000 decars	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA	
Output 1.3: Supporting non-farm employment	People trained in business and entrepreneurship (as rural tourism, post production processing, etc.) (RIMS 1.5.4-Level 1)	Number of trainees, disaggregated by province, gender, topic and type of training	Zero (2012)	68 person participated the rural tourism workshops (2015) 2016 end year plan: +30 women trained on entrepreneurship and (rural) business development	- To be defined by PMU based on PDR figures and AWPB projections - 100 beneficiaries	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA	
	Market facilities (including selling points) constructed / rehabilitated	Number of facilities, by type and province	Zero (2012)	Project review and tender preparations ongoing for 6 grape juice workshop and 5 local product sales and promotion units.	- To be defined by PMU based on PDR figures and AWPB projections - 10 local product workshop and sales/promotion units	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA	
Component 2: Village Infrastructure									
Outcome 2: Improved access to	Effectiveness of project supported	Number and share (%) of targeted farmers	30% of farmers have access to pasture land in	An estimate of 56 % of the households (appr. 46.000 households/81.000) provided	At least 50% of targeted	Annual farmer surveys	Annually (farmer surveys)	The PMU is responsible to manage/cond	

productive rural infrastructure	productive infrastructure (RIMS 2.1.2-Level 2)	with secure access to: -livestock water facilities, -Marketing facilities, -Improved pastures -Shepherd shelters	surrounding villages (common pasture lands) and 60% have access to pasture land of their village (2011). 48% of villagers stated having water access problems.	access to Livestock Water Facilities and Pasture Roads via SPA protocols Ardahan Livestock Market operating, 5 new LMs design completed, construction process started. 20 shepherd shelters design completed, under procurement process.	households have: -Access to improved LWF -Access to improved LMF. At least 75% of targeted villages have: -Access to improved pastures and rangelands. -Access to adequate shepherd shelters	conducted by the project Independent final project outcome and impact assessments	At project completion - Final Project Impact assessments	uct annual farmer surveys, and to commission independent final outcome /impact assessments.	
	Sustainability of project supported productive infrastructure (RIMS 2.1.3-Level 2)	Number of infrastructures functioning three years after construction	Not applicable	Co-financed greenhouses constructed in 2013-2014 started to generate income for their owners.	Project supported infrastructures are sustainable over time				
Output 2.1: Establishment of livestock markets	Livestock market facilities constructed and/or rehabilitated (RIMS 1.4.3-Level 1)	-Number of livestock markets constructed -Number of livestock rehabilitated (Disaggregated by province and district)	No licenced markets as of 2011 (4 small markets were existing in project areas)	Ardahan Livestock Market operating, 5 new LMs design completed, construction process started.	4 new licensed markets constructed and 2 existing markets rehabilitated and licenced.	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA	
Output 2.2: Development of livestock water supply facilities	Livestock water points constructed or rehabilitated	Number of new water points constructed (Disaggregated by province,	Scattered water points with reduced accessibility were existing before the project	Construction of 86 facility, serving to 100 villages	120 villages in project targeted areas have new livestock water points	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the PDA	

	(RIMS 1.1.6- Level 1)	district and village)							
Output 2.3: Rehabilitation and construction of pasture roads	Roads constructed / rehabilitated (RIMS 1.4.2- Level 1)	Number and length (in KMs) of constructed /rehabilitated pasture roads and number of villages served	Inadequate pasture road conditions characterized the project area as of 2011.	Pasture roads serving pastures of the 35 villages constructed/ rehabilitated	To be defined by PMU based on Project Design Report figures and AWPB projections Access to pastures of 80 villages in project targeted areas	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from the SPAs and contractors	
Output 2.4: Rehabilitation and construction of livestock facilities	Productive infrastructure constructed / rehabilitated (RIMS 1.1.16- Level 1)	Number of facilities by type, and number of villages benefiting, disaggregated by province and district	Insufficient and inadequate livestock facilities in project areas	7 protection fences constructed, 20 shepherd shelters procurement process ongoing, 2 animal care unit construction partially completed.	- To be defined by PMU based on PDR figures and AWPB projections - At least %50 increase in the number of households benefiting from qualified livestock facilities.	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from PDA	
Component 3: Institutional Strengthening									
Outcome 3: Institutions providing appropriate services to targeted smallholder producers sustainably strengthened	P/DDA capacity to provide service to smallholders/farmers	Number of annual visits to villages by P/DDAs staff - Number of field days conducted by DDAs - Number of farmers applying to P/DDA for information		AKADP PMU experts conducted all field visits with the participation of at least one DDFAL staff in the districts, approximately once in a week in different districts. - 2 field days organised by end of 2015. Due to extraordinary conditions in the country, field days and similar activities cancelled in 2016; - Co-financing and demonstration requests and applications to DDFALs, increased, as observed from increase in applications of the co-financing programmes.	-Increase in number of annual village visits by P/DDAs. - Increase in the number of field days conducted by DDAs - 10% increase in number of farmers applying to P/DDA for information	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from PDA	Required "culture" change towards responsiveness to clients supported by ministerial, district leaders

Output 3.1: PDA and DDA staff training	Government officials trained	Number of trainees, by gender, institution and topic	Zero	5 AKADP Responsible Officers participated to co-financing training of PMU, 6 Kars PDFAL Officers to strategic planning seminar 8 Kars PDFAL officer and executive participated to Kars Kashar Cheese Symposium All District DFAL responsible officers participated to the field visits of PMU experts and joined field trainings for beneficiaries, in 2016 PDFAL Kars officers participated to a communication techniques seminar	- To be defined by PMU based on Project Design Report figures and AWPB projections - Participation of P/DDFAL AKADP responsible staff to at least 2 activities organised under/in line with the project.	M&E Progress Reports	On a six month basis	The PMU is responsible to collect the data from PDA	
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Appendix 3: Summary of key actions to be taken within agreed timeframes

Action Agreed	Responsibility	Agreed date
Component 1. Smallholder and Non-farm Enterprise Investments		
Targeted distribution of fodder seed to smallholders; expansion to districts without fodder seed distribution	PMU	Spring 2017
Co-financing of closed barns; rehabilitation of existing smallholder barns	PMU/MFAL	December 2016
Demonstration of silage pits suitable for smallholders	PMU/MFAL	December 2016
Support transport and targeted technical assistance to MCC	PMU	January 2016
Training and assistance by experts to orchardists and vineyards – demonstrations and co-financing	PMU/MFAL	December 2016
Greenhouse vegetable production training to farmers entering co-financing for new greenhouses	PMU/MFAL	December 2016
Provide training to beneficiaries to see farming as a business	PMU/MFAL	December 2016
Component 2. Village Infrastructure		
Development of specific management, operation and maintenance plans for each of the livestock markets	MFAL	1 March 2017
Identify the best LWF to be included in the next AWPB	SPA	During AWPB workshop
Conduct a detailed geo-physical study of potential areas and design and construct a solar-powered pump cum well system	PMU	By June 2017
The rehabilitation and construction of pasture roads should be prioritised in those areas where Component 1 is active	MFAL	During AWPB workshop
Identify opportunities for investing in improving existing irrigation systems or developing new ones where studies have already been conducted	SPAs	By May 2017
Monitoring & Evaluation		
Include the district of Damal in the 2017 AWPB	MFAL/PMU	December 2016
Give more emphasis to deliver services to farmers with lower land and livestock assets, as defined at appraisal in the preparing the 2017 AWPB.	MFAL/PMU	December 2016
Develop mechanisms to establish partnerships with private sector to manage, operate and maintain LSM	MFAL	May 2017
Hire consultancy services based in Kars to carry out the M&E functions	MFAL	December 2016
Draft TORs for project impact assessment	MFAL/PMU	31 Dec 2016
Conduct Impact Assessment Survey	PMU/MFAL	By 31 July 2017
Prepare a focused technical training programme for PDA/DDA staff	PMU	31 Dec 2016
Fiduciary Aspects		

Keep an updated registry of contract to be submitted to IFAD along the project's progress report twice a year.	UNDP	Immediate
Update the bidding document for NCB and LS on goods by adding a reference on the availability of translated specifications in English.	UNDP	Immediate
The PMU to consolidate its contract registry related to matching grants with the above-listed information and translate it into English.	PMU	31 December 2016
Prepare every six months, in addition to the other financial tables, a statement of commitments (signed contracts) by component, category and by financier for the semester, the year and cumulative since the beginning of the project.	PMU/UNDP	From Dec 2016
Review the reallocation of loan by category given the deviation between the appraisal and current exchange rate USD/SDR.	IFAD/MFAL/PMU	December 2016

Appendix 4: Physical progress measured against AWPB, including RIMS indicators

Component	Activities	Unit	2014			2015			2016 (October 31)			Cumulative		
			Target	Actual	%	Target	Actual	%	Target	Actual	%	Target	Actual	%
1.1 Smallholder Livestock Investments	Barn Design Works	unit												
	Barn Constructions	unit	6	2	33%	3	0	0%	1	0	0%	10	2	20
	Sheep Shelter (construction)	unit							2	0	0%	2	0	0
	Village Cooperative Supports	unit	3	1	33%							3	1	33
	Village Cooperative Supports (construction)	unit				1	0	0%				1	0	0
	Transportation and Labor	day	150	115	77%							150	115	77
	Silage Halls	beneficiary				10	0	0%				10	0	0
	Milk Center Vehicles	Unit				2	0	0%				2	0	0
	Milk Center Consultancy Services	project	2	2	100%	1	1	100%				3	3	100
	Milk Center Consultancy (Capacity development)	unit							1	1	100%	1	1	100
	Milk Center Constructions	village	4	4	100%	3	0	0%				7	4	57
	Agro Machinery Purchases	Unit	8	8	100%							8	8	100
	Agro Machinery Co-finances	beneficiary				4	1	25%	6	7	117%	10	8	80
	Forage Crops	da	560	411	73%	1900	1900	100%	1900	3400	179%	4360	5711	131
1.2 Horticulture Practices	Technical Trainings	staff				4	0	0%	4	4	100%	8	4	50
	Farmers Exchange Visits	beneficiary	25	35	140%	62	28	45%	28	28	100%	115	91	79
	Village Extension Trainings	beneficiary	900	556	62%	300	242	81%				1200	798	67
	Hay Storage Units	beneficiary				8	0	0%				8	0	0
	Orchard demonstration	da							8	15.6	195%	8	15.6	195
	Orchard Co-finances	beneficiary	43	32	74%	88	126	143%	50	74	148%	181	232	128
	Processing Units	beneficiary				2	0	0%				2	0	0
1.3 Non Farm Investments	Greenhouse Co-finances	beneficiary	45	24	53%	26	56	215%	50	42	84%	121	122	101
	Technical Trainings	staff	0	38	100%				4	4	100%	4	42	1050
	Farmers Exchange Visits	beneficiary	60	67	112%				38	37	97%	98	104	106
	Village Extension Trainings	beneficiary	0	66	100%	150	124	83%	125	125	100%	275	315	115
	Workshops on Rural Tourism	beneficiary				60	63	105%				60	63	105
	Technical Trainings	staff				20	17	85%				20	17	85
	Family type greenhouse	unit							40	40	100%	40	40	100
	Local product sales, promotion and marketing unit	unit							1	0	0%	1	0	0
	Provision of equipment for local products workshop	unit							2	0	0%	2	0	0

Republic of Turkey
Ardahan-Kars-Artvin Development Project (AKADP)
Supervision report - Mission dates: 7-18 November 2016
Appendix 5: Physical progress measured against AWPB including RIMS indicators

Component	Activities	Unit	2014			2015			2016 (October 31)			Cumulative		
			Target	Actual	%	Target	Actual	%	Target	Actual	%	Target	Actual	%
2.1 Village Infrastructure	Cattle Handling Facilities (construction)	village				2	0	0%				2	0	0
	Fences for Milk Centers (construction)	Unit				4	0	0%				4	0	0
	Protection and Clustering Fences (construction)	village	7	7	100%	3	0	0%	15		0%	25	7	28
	Shepard shelters (construction)	Unit							20	0	0%	20	0	0
	Drillhole and Borehole Design Works	Unit	0	3								0	3	
2.2 Livestock Markets	Livestock Markets (construction)	Unit	1	1	100%	1	0	50%	5	0	0%	6	1	17
	Livestock Markets (design)	Unit				1	0	0%	4	4	100%	5	4	80
2.3 Roads and Water Investments	Livestock Water Systems (construction)	village				41	53	129%	14	6	43%	55	59	107
	Pasture Road Rehabilitations (construction)	village				5	20	400%	29	11	38%	34	31	91
2.4 Design Works	Design Works for semi-open barn, forrage store and silage pit	Unit				1	1	100%				1	1	100
	Livestock Water Systems (design)	Unit				1	1	100%				1	1	100
	Livestock Markets (consultancy)	project	1	0	0%	1	1	100%				2	1	50
	Sewerage Design Works	Unit				2	0	0%				2	0	0
3.1 Improving Institutional Capacity	Vehicle Purchases	Unit	6	6	100%							6	6	100
	Tradeshows Visits	beneficiary												
	Office Supply and IT Equipment Purchases	Unit				30	46	153%				30	46	153
	Staff Trainings	staff				15	0	0%	15	15	100%	30	15	50
	Staff Trainings (abroad)	staff							25	0	0%	25	0	0
	Staff MidTerm Meetings	Unit	1	0	0%							1	0	0
3.2 Project Management	Vehicle Rentals and Gas Purchases	month	8	8	100%	9	9	100%	11	11	100%	28	28	100
	Project Advertisement and Awareness Activities	Unit							1	1	100%	1	1	100
	Grand Total	Beneficiaries	1073	780	73%	710	640	90%	297	313	105%	2080	1733	83
		Gov. Staff	0	38	100%	39	32	82%	48	23	48%	87	83	95
		Village	13	11	85%	54	73	135%	58	17	29%	125	101	81
		Dekars	560	411	73%	1900	1900	100%	1908	3415.6	179%	4368	5726.6	131

Appendix 5: Financial: Actual financial performance by financier, by component and disbursements by category

Table 5A: Financial performance by financier

Financier	Appraisal (USD '000)	Disbursements (USD '000)	Balance	Per cent disbursed
IFAD loan	19200	9313	9887	49
Government	3221	2466	755	77
Beneficiaries	3994	1313	2681	33
Total	26415	13092	13323	50

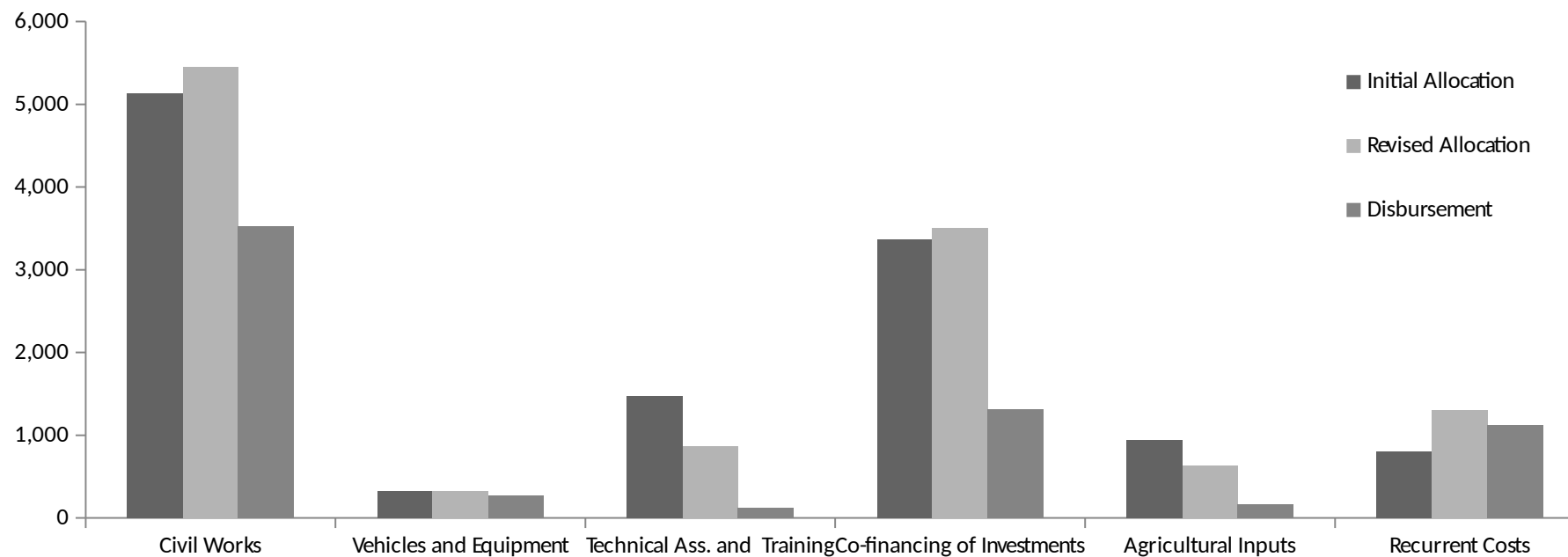
Table 5B: Financial performance by financier by component (USD '000)

Components	IFAD Loan			Government			Beneficiaries			Total		
	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
1. Smallholder and Non-farm Enterprise Investments	7 667	2 276	30	0	959	N/A	3 569	1 313	37	11 236	4 548	40
2. Village infrastructure investments	8 152	5 021	62	1 793	720	40	425	0	0	10 370	5 741	55
3. Institutional strengthening and PM	3 381	2 016	60	1 428	787	55	0	0	N/A	4 809	2 803	58
Total	19 200	9 313	49	3 221	2 466	77	3 994	1 313	33	26 415	13 092	50

Table 5C: IFAD loan disbursements (SDR, as at October 31, 2016)

Category	Initial Allocation (1)	Revised Allocation (2)	Disbursement (3)	Balance (2) - (3)	% disbursement (3)/(2)
Authorized Allocation Designated Account	0	0	1 623	-1 623	N/A
1. Civil Works	5 130	5 450	3 529	1 921	65
2. Vehicles, equipment & goods	330	330	266	64	81
3. TA, training & workshops	1 470	870	123	747	14
4. Co-financing and investments	3 370	3 500	1 312	2 188	38
5. Agricultural inputs	940	630	167	463	27
6. Recurrent costs	800	1 300	1 124	176	87
Unallocated	40	0	0	0	N/A
Total	12 080	12 080	8 144	3 936	67

Figure 1: IFAD loan/grant disbursement, comparisons between original and revised allocations and actual disbursement



Appendix 6: Compliance with legal covenants: Status of implementation

Section	Covenant	Target/Action Due Date	Compliance Status/Date	Remarks
Section 4.02	PCU to open and maintain a Project Account to make an initial deposit equivalent to USD 2.500.000		Complied with.	
Section 4.02	GOT to replenish Project Account quarterly in advance		Complied with.	Withdrawal Application for replenishment was prepared once in 2016.
Section 4.03	Procurement of goods, works and services carried out in accordance with the procedures laid down in Schedule 3		Complied with.	
Section 4.04	Insurance of vehicles, equipment and civil works financed from the loan proceeds to be consistent with sound commercial practice.		Complied with.	
Section 4.05, section 11.10(b)	Audit report submitted to IFAD.		Complied with.	
Section 4.06	Progress reports to be submitted to IFAD on a quarterly basis.		Partially complied with.	Progress report was prepared semi-annually.
Schedule 4, para 7	AWPB to be submitted to the Fund, for its review and comments		Partially complied with.	The 2016 AWPB was submitted in January 2016.
Schedule 4, para 8(a)	A Mid-Term Review (MTR) to be carried out jointly by the Borrower and IFAD.		Not complied with.	A Mid-Term review was not done.
Schedule 4, para 16	Project to be exempted from all import duties, excise taxes and value added tax (VAT) on investment expenditures		Complied with.	

Appendix 7: Knowledge management: Learning and Innovation

Learning

Despite the actual and potential innovations mentioned below, the project did not conduct close systematic monitoring and data collection to document their outcomes and impact on smallholders (following last supervision's recommendation), introducing appropriate knowledge management products to disseminate knowledge and share results to enhance replication and scaling up. Nonetheless, some effort has been deployed in producing a film for the promotion of project activities for MFAL internal use and regional/national broadcasting. In addition, Kars PDA staff and 'Milk producers' and 'Livestock Breeders' Associations attended and contributed to the organizational cost of a symposium in July 2016 on 'Increase value added in cheese production through the use of geographic indication and product variety'. Further learning is expected to stem from next year impact survey and stakeholders workshop.

Innovation: Describe any interesting innovation noted during supervision

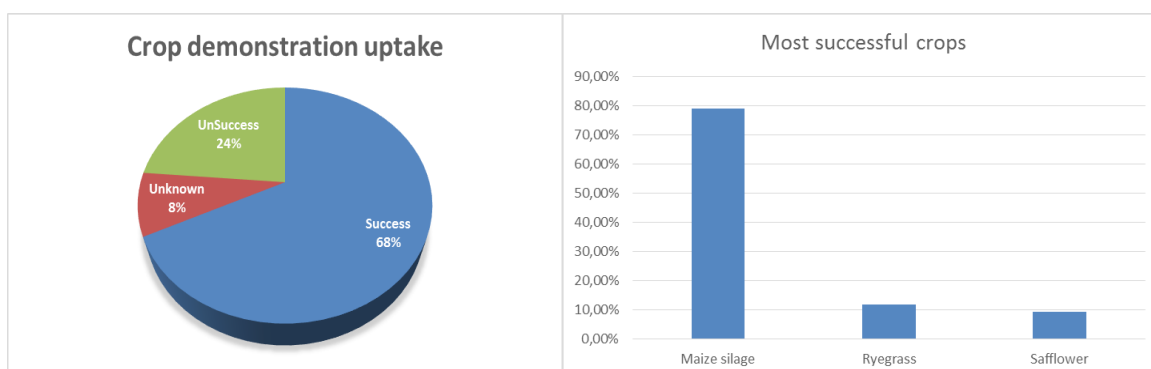
The previous IFAD supervision mission in 2015 noted several innovative interventions of the project which could impact rural populations. Of these, under Component 1, the polycarbonate greenhouses continued to be scaled up in targeted horticulture districts of AKADP. Smallholders adopting greenhouses have switched their production focus from activities such as wheat, apricots, and livestock, to more intensive production of high value vegetable and fruit crops. Farmers with greenhouses were more productive on their small plots, growing 2-4 crops per year for selling in local markets in surrounding towns. Scaling up and replication through co-financing of greenhouse adoption is driven by farmers responding to market demands - project districts import the bulk of their fruit and vegetables, so the adoption of greenhouse vegetables provides an 'import-competition' solution with cheaper local produce. AKADP introduced innovative vineyard designs for production of fresh grapes that substituted wood with galvanised steel posts, which last longer, and require less maintenance and land. Farmers can more easily construct, move and expand their vineyards with these lighter weight constructions. The introduction of high quality fodder seed into farming rotations for livestock producers has been one of the most innovative and high impact interventions of the project. The promotion of silage production complements these fodder interventions, which provides higher quality fodder for livestock that reduces the fall-off in body condition of cattle during the winter enclosure. Farmers reported up to doubled fodder production off their land through adoption of higher quality fodder crops.

While there are opportunities to innovate under Component 2 by using new technologies, the project has been rather timid in including them. One of them is the proposed use of biogas plants to deal with the waste produced at the livestock market facilities. Besides addressing the potential environmental issues with waste disposal created by the new markets, it would also reduce the overall external energy requirements of the facility as the energy generated could even make the facility self-sufficient. Another area of possible innovation and long discussed by the project without yet any concrete action, is the introduction on a pilot basis, of solar-powered pumps to provide drinking water for livestock in the upland pastures. Despite a preliminary geotechnical study that confirms the presence of shallow groundwater, a decision to design and install such system has not been made. Lastly, the introduction of new concepts in agri/eco-tourism to the project area, have been explored by the project, including through a study tour. Although no concrete action has been taken, a proposal is under development to be included in the 2017 AWPB.

Appendix 8: Economic and financial sustainability

1. The mission analysed several interventions made by the project. Forage crop demonstration. The mission had the opportunity to interact with farmers benefitting from forage crop demonstrations, training and seeds/seedling distribution. Most of the farmers reported increase in yields of 50% on average and up to 100% in some case. Similarly, farmers conveyed that the use of small equipment and machinery substantially contributed to a reduction in production cost as it helped decreasing both post-harvest losses, and the demand for labour force during planting and harvesting season. The activity performed better than others in terms of disbursement and achieved results, and could therefore be fostered further in the months to come. Graphs below depicts the share of success and unsuccessful cases in crop demonstration identifying the most successful crops out the successful cases. These figures are partial and do not included many of the observations included in the PMU database as most of the values were not yet rated by the time of the mission. For example, during field mission, farmers reported satisfying results about Triticale and Hungarian vetch production. Unfortunately, these are yet to be included in the databases.

77. Modern Barns. Throughout the project implementation period only 3 barns have been constructed (1 semi-open barn and 2 sheep shelter) in Selim and Ardanuç with an average cost of



213.000 TL and 140.000 TL respectively. The very low outreach lies behind the high investment cost and high co-financing contribution required from farmers, which ranged from 36.000 TL up to 60.000 TL. The high cost discouraged and excluded those marginalized, worse-off farmers the programme was aiming at, proving that the investment is unattractive under current conditions. Despite the attempt of revising the design of the barns, towards a lighter and cheaper structure, the investment has not met the interest of the target group.

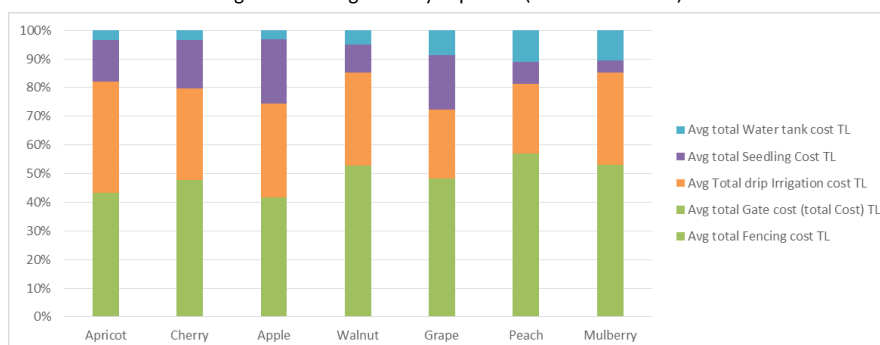
78. The 2014 SM recommended to PMU to refrain from further promotion of modern barn investments until viable solutions had been identified. This mission ascertained that, despite a new barn design, no progress have been made under this activity mainly due to a belief that a lighter structure would not properly protect animals during the harsh winter season predominant in the programme area. All things considered and in light of the short term preceding the project completion, the mission highly recommends to diverting funds previously allocated to this activity towards more productive and ready-to-be-implemented ones.

79. Cold milk collection centres. Two cold milk collection centres were established by the Kars Dairy Association and other two cold milk collection centres were set-up by the Ardahan Breeders Association in 2014 through project grants. The profitability of these activities is yet to be confirmed and it is very hard to find any value for money in investments that have not been functioning since their completion. Among technical and organizational issues, it appeared evident the lack of trucks suitable for raw milk collection at farm gate. None of the facilities has initiated operations and the whole functioning mechanism and its logic is yet to be proven valid. Processors continue seeking raw milk directly at farm-gate, paying a price close to the expected 1.2 -1.5 TL/litre that collection centres are planning to pay. The selling price from the centres to processors has been calculated around 1.4 – 2.1 TL/litre on the basis of the expected O&M cost of the facility (10-15 % of raw milk value). No mark-ups have been identified, as managers reported the non-profit nature and spirit of the centres, which

would ultimately serve the purpose of formalizing and registering milk producer and production at local level.

80. Yet, considering that raw milk prices have not been increasing for 20 months - it has been declining for 3-4 months and the lowest price (1.15 TL/ litre) – farmers are keen to sell milk products (cheese and butter) which provide better returns and a degree of independence as compared to raw milk. Currently milk price is determined by National Milk Board (NMB) which is expect to make policies, to put them into practice, to develop the sector and undertake tasks to regulate the market. The board is also a member of International Dairy Federation. However keeping the raw milk prices at the same level (1.15 TL/litre) and purchasing of raw milk by the industry at a lower price than 1.15 TL/litre has put the milk producers (farmers) in a difficult situation. This feels particularly painful for the producers because, in some cases, the raw milk purchased at 0.70 TL/litre from the farm is sold at

Figure 2: Average cost by expenses (as % of total cost)



3.35 TL in the domestic market as processed products.

81. The mission is concerned about the sustainability and survival potential of these centres as there was a general disagreement among farmers on delivering – or not - their milk production to the collection centres. A previous SM 2015 had also stressed the need of a Value chain study on milk production and processing analysis, which would have helped identifying bottlenecks at both sides of the chain and possible solutions. Unfortunately, as of today, the study has not been done and little evidence supporting the ideas around this collection mechanism and its potential is provided. The mission also noticed there has not been establish linkages of these centres to the private sector.

82. Modern orchards and greenhouses construction. The mission had the opportunity to visit several demonstration and co-financed greenhouses (mainly tomato, cucumber and onion) likewise orchards (walnut, apples, apricot and mulberry) in the three provinces of the project. In Kars and Ardahan provinces greenhouses appear to be projecting better revenues than orchards production in terms of both technology uptake and market opportunities. The main cause behind the low co-financing uptake of orchard production is related to expensive design particularly concerning to cost of fencing which makes up to the 45% of the total investment cost (in figure below gate and fencing cost are grouped together). A relatively different situation has been witnessed in Artvin province where a cheaper suitable design in the fencing installation contributed to a much higher response by farmer which eagerly adopted and replicated the technology.

83. Notwithstanding an overall good practice dissemination, the mission noticed that, in most cases, orchard production is still running below its potential due to belated implementation and lack of appropriate technical assistance in some cases. More in details, assistance in pruning, use of drip irrigation and the liquid fertilization system are deemed necessary so as to guarantee positive returns overtime.

84. Investment in greenhouse production is particularly relevant in the Artvin province, where indeed several farmers adopted - and in some cases replicated on their own - the investment. In terms of economic relevance on the market, tomato production is the key driver of income composition with cucumber, onion and lettuce following. Despite the marketing potential of vegetables production, greenhouse size and technical knowledge in disease control, represent a limiting factor for accessing the market.

85. Livestock market facilities. The 2015 supervision mission recommended to reconsider further investments in Livestock Market Facilities and ultimately subject these investments to feasibility studies and the development of a comprehensive business plan for the market. Further, the original

Project Design Report document (par. 92) highlighted the need of such facilities to operate in a self-sustained manner and therefore elude over-spending and the creation of an economic burden at municipal level. During the field visits, the team was informed that five livestock markets are undergoing construction/preparation and will be concluded by the time of project completion (September 2017). Yet, notwithstanding previous recommendations, there is an evident lack of economic reasoning behind the construction/rehabilitation of such facilities. In particular, three out the six markets⁶ have undergone very generic feasibility studies which do not meet the minimum technical standards expected for such evaluations. In addition, two of the three studies provide the identical results, hence highlighting the generic approach adopted and the lack of a detailed scrutiny of the local context, livestock population dynamics, needs and demand of such infrastructure in the district.

86. The 2014 SM estimated the IRR for the Ardanuç livestock market (ALM) at 8% following the changes in design and additional delays in completing construction. In addition to what above, field visit at ALM raised doubts about the sustainability of the investment. In fact, despite a clear indication that O&M costs cannot be compensate by the low fees collected at the entrance (1 TL/head), there is a degree resistance in adopting a more self-sustaining strategy concerning the management of the facility. Considering the low achievements especially for some of the activities a proper ex-post EFA is highly advised at programme completion using as reference the original EFA and the few feasibility studies.

87. A clear, detailed and ground-truth business/operational plan would need to be developed and indicate break-even points upon which service fees should be calculated. Further, despite its public ownership, the mission recommends to explore collaboration and inclusion of a private entity in the management of the facility. Apart from increasing the likelihood of a sustainable development overtime, the latter would also prepare the ground for a more systematic value chain approach within a Public-Private-Producer Partnership⁷ (4Ps) framework, which could be considered in a scaling/follow-up project.

88. Pasture roads and livestock water facilities. A total of USD 0.93 million have been used for pasture roads that have been constructed in the three provinces. The investment has been largely appreciated by local herders and other community dwellers as most of them reported positive economic impact related to increase in livestock productivity, cost savings in terms of vehicle maintenance, time saving during the summer move to highlands and social benefits referring to the chance of getting direct medical assistance as needed. Further, the investment is pivotal in guaranteeing access to trucks that could directly collect milk in the uplands, and therefore reduce milk loss and time waste during on foot transportation downhill.

89. Provision of livestock drinking facilities is a complementary investment which has been provided to 14 villages in the project area. Farmers noted an increase in milk production and better animal health since the installation of the facility in the highlands. The mission recognised the value for money and the capacity of such investment of increasing livelihood of rural communities and their herds, and would therefore suggest to expand such investment and facilities where most needed after need and priorities are taken into account.

90. Livestock handling facilities. Despite an initial interest around the innovative facilities deemed to support a more efficient delivery of veterinary services to the livestock keepers (for artificial insemination, vaccinations, etc.) the mission witnessed doubts from herders about the actual usefulness of those facilities. The only facility visited was incomplete, partially used and clearly below the required quality standards. Farmers complained about the poor status of the facility and admitted of using it very seldom or never. There is also common perception that the facility is an unsafe place for animal keeping, as several animal theft occurred or were thwarted in the past in the surroundings. Regarding its management, there is not a clear understanding on which entity should be responsible for the maintenance of the facility and whether the municipality will have the capacity and willingness of doing so. The mission discourages investing further in this activity.

6 Ardanuç, Posof and Sarikamis

7 [How to do Public-Private-Producer Partnership in agricultural value chains](#)

Appendix 9. Component 1. Smallholder and Non-farm Enterprise Investments (USD 11.22 million).

1. The project covers an area that is one of the least developed and poorest regions of Turkey. The population is mostly located in rural areas where incomes depend on low input/low output agriculture production. Target farmers use traditional methods in cropping and livestock practices with limited access to improved inputs. This situation is exacerbated by migration of young people from the region to urban areas with better employment and welfare opportunities. The farming community is dominated by the elderly and women. The project targeted seven livestock districts (Ardahan 3, Kars 3 and Artvin 1) and three horticulture districts (one in each province).

2. Initially, the project targeted 40 villages, but during IFAD mission in 2013 it was decided to include four additional villages in Artvin province, so the total number of project villages increased to 44. The project target group is economically active livestock and agriculture producers who want to move towards more commercialized business models. Target groups are: livestock producers with less than 20 registered cattle; and horticultural crop producers with 0.3 - 0.5 ha (3-5 da) of vegetable plot or small greenhouse. The project also supports non-agriculture sectors in project villages that have economic growth potential such as rural tourism. The initial menu of investments was developed based on guidance provided by Provincial and District Departments of Agriculture (P/DDA). Activities reflected agro-ecological characteristics, dominant production types and patterns, market conditions, specific needs of smallholders, availability of non-monetary resources such as human capital and issues related to seasonal access in different locations of the project area. The component was designed to be flexible and responsive to project experience, particularly feedback from beneficiary and non-beneficiary members of AKADP.

3. During the review period, the project mainly focussed on relatively successful activities, such as fodder crop production, orchards and greenhouses, and less on activities, such as barn construction, and off-farm employment. Interventions such as the milk collection centres, have not progressed since the previous IFAD mission in 2015, and their viability remained questionable. The project progressed against its targets for fodder crop support with provision of seed, training and machinery. Posof district was added to the project during 2015-16 with extra horticulture activities. The component recorded improved financial disbursement and implemented most of the activities agreed in the AWPB for 2015/16 compared to targets. As of November 2016, the component had only expended 40 percent of its budget allocation. Activities continue to be responsive to the wishes of P/DDAs with little observed analysis of the prevailing operational environment informing investment decisions nor adequate targeting of beneficiary farmers, who could be most impacted by activities. The overall performance of Component 1 is rated moderately satisfactory.

4. **Sub-Component 1.1. Improvement of Livestock Husbandry Practices** was mainly targeted at dairy farmers (milk mostly for local cheese production), although the dominant cattle breed (Simmental) is dual purpose and meat production is a significant income earner for smallholders. The activities under this component became more focussed on provision of fodder crop seed, feed conservation machinery, training, exchange visits, and support to milk processors.

5. **Output 1.1.1. Provision of fodder crop seed.** Almost 30 mt of fodder seed was distributed to 336 farmers of the 11 livestock districts in the three province during 2015/16, and 30 farmers were trained in improved silage production. Farmers met during the mission were highly satisfied with their productivity gains from their improved pastures, with some farmers reporting doubled output. This activity mainly supports larger farmers (more than 50 cows), who have sufficient irrigated land, labour and mechanisation to obtain the potential productivity gains from improved pastures. Farmers receive one allocation of seed to ensure equal distribution of improved seed to as many farmers as possible in these districts. Farmers had successfully included animal fodder crop production into their wheat-growing rotations, with higher returns following support from AKADP.

6.	Amount (Mt)	Land (da)	No. Farmers	
Spring 2016				
Sainfoin	11.90	1,185	118	
Common Vetch	4.55	455	47	
Maize (silage)	0.80	320	19	
Alfalfa	0.51	171.5	23	
Total	17.76	2,131.5	207	
Autumn 2016				
Hungarian Vetch	2.78	503.6	60	
Triticale	8.80	565	69	
Total	11.58	1,068.6	129	

Table 2. Improved fodder seed distribution, 2016

Recommendation:

- The fodder seed distribution intervention should be expanded beyond the existing three districts to other livestock-targeted districts, and be more inclusive of smallholder farmers.

7. Output 1.1.2. Farmer training and visits. A program of on-farm demonstrations (e.g. best practices for cereal and forage production and silage making); farmers training courses (e.g. animal husbandry and management, farm business development, barn/livestock hygiene, animal nutrition); and farmers exchange visits for animal husbandry were included in the project design. A total of 254 farmers were trained on modern improved husbandry practices, animal health and hygienic milk production. Training was also provided to 15 local milk processors who visited other dairy production areas of Turkey to learn about the use of cold milk supply chains, food safety, and marketing. Several farmers met in Kars who attended the training were critical - of the methodology and content; some claimed they knew more than the instructors; and the cattle nutrient supplements recommended by trainers were not available locally. This suggests the project did not adequately target those farmers, most likely smallholder farmers, who would likely have benefited the most from such training topics and visits to processing facilities. Also, the farming as a business course, which was scheduled to be held alongside technical training courses in 2015, needs to be re-considered and re-contracted during the final year of the project. Such training would be beneficial to targeted smallholder farmers, which would help professionalise the industry and assist farmers to be more commercially focussed.

Recommendation:

- Better selection of farmers to specific training needs.
- Ideally, the farming as a business training course included in the original AKADP design and mentioned in the previous IFAD ISM should proceed in 2017, however, due to limited time remaining in the project and other priorities, this training would be unlikely to be contracted and implemented.

8. Output 1.1.3 Farm facilities, semi-open barns and sheep pens. There was no progress on construction of semi-open barns and sheep pens during the review period. While the ministry was keen to demonstrate modern, semi-open barns to local farmers, the model proposed by the project was too expensive for smallholders, who were not convinced that a semi-open barn was superior to traditional closed barns. The PMU had suggested a higher stocking rate in semi-open barns as a way to reduce costs for a semi-open barns; new designs were agreed with the ministry and three pilot barns were to be constructed during 2015. However, these barns were not built due to tendering delays and lack of support from provincial officials. This could be partly explained due to a parallel government program sponsoring construction of closed barns (on a 50:50 cost-sharing basis) in project districts, supposedly at half the cost of the proposed AKADP semi-open barns. Many well-constructed, good hygiene closed barns for smallholders (20-40 cows) were observed during the mission, yet PMU continued to pursue semi-open barns even though these proved unsatisfactory to target farmers. Modern closed barns targeted at smallholder farmers in livestock project districts should be proposed as co-financing options to farmers during the remainder of the project.

9. Rehabilitation and upgrades to existing smallholder barns could have provided a significant impact to project beneficiaries and was envisaged as a major activity in the project design. Activities were to include: provision for capital assets (modern barns, drinking troughs, manure pits, hay storage premises, mobile veterinary clinics, etc.) equipment and materials (milking machines, portable generators, disinfectants for barn and livestock hygiene, etc). None of these investments were implemented by the project, and lack of activity under this sub-component was a missed opportunity in project areas to assist smallholders improve their existing barn structures.

10. Silage was becoming a more important component of farmers' fodder conservation practices, which is more nutritious to livestock than traditional dried fodder conservation in bales, stacks etc. The project design included demonstration and financial support for efficient fodder conservation, which included promotion of silage pits, silage making machinery, and hay-baling equipment. The mission saw several photos of dangerous silage-making practices during DDA's presentation of livestock project activities in Sarikamis district in Kars. Project engineers informed the mission that they had developed plans for construction of silage pits and demonstrations of silage making in these pits, but due to lack of interest from P/DDAs in project areas, PMU had not pursued any silage demonstration interventions. Safe forage making in pits suitable for smallholders needs to be demonstrated during the remainder of the project.

Recommendations:

- Time permitting, affordable modern closed barns should be proposed for co-financing to smallholder farmers (less than 40 cows).
- Co-financing for existing barn upgrades with modern equipment and systems, and rehabilitation of barns as assessed by the team as worthwhile investments.
- Demonstrations of safe silage making practices in pits of suitable size for smallholders

11. **Output 1.1.4. Agriculture machinery support.** The project co-financed one entrepreneur (Arapcay district) to purchase silage-making equipment and he established a successful business selling maize silage and contracting his services to other farmers. Additionally, AKADP supported a local entrepreneur manufacturing silage machines, that were cheaper and lower capacity than imported equipment such as the machinery purchased by the contractor. This is an excellent project initiative that helps support smallholders with a lower cost machine, plus supports local industry and employment in Kars. Other agriculture hardware visited during the mission included the animal care unit in Sulakyurt district. These yards were poor quality; the animal crushes had not been assembled, welding joints were rough, poor quality steel and workmanship meant the unit was rusting and falling apart. The project had not advanced funds to the contractor, who had become bankrupted.

12. **Output 1.1.5. Enhanced operational quality and capacity of Milk Collection Centres.** The four milk collection centres (MCC) co-financed with the Kars Dairy Association (two) and the Ardahan Breeders Association (two) remained non-operational with little observed progress in business development since the previous IFAD supervision mission in 2015. PMU hired an ex-Danone dairy expert during 2016 to assist fit-out of MCCs, provide technical support for milk collection activities, and advise directions for the milk distribution business. Association officials claimed the units had only been completed during 2016, and would be operational before commencement of the next milk season in spring 2017. They had received commitments from local farmers to begin supplying to MCCs for the next season. Each unit is small-scale (about 4,000 litre capacity) and conveniently located in peri-urban areas, with good connection to town utilities.

13. Current milk supply networks revolve around local cheese manufacturers who depend on long-term relationships with dairy farmers in a certain village(s) to provide them sufficient supplies of milk for their cheese retailing business. Processors provide advance payments to their farmer suppliers for up to 60 percent of the potential annual returns of the farmer based on their previous year's production. The price and volume are negotiated prior to commencement of the milk season in spring. This type of payment system is well-entrenched within the local dairy industry, based on long-term mutual trust. Other payment systems include monthly payments to farmers; and some farmers were partnering with processors and obtaining a share of the retail returns, which provide higher income to farmers. However, they need to wait until the processor had made cheese and sold the produce.

14. The supply of milk varies during the year, and a milk processor interviewed during the mission said his supplies ranged from 500 litres per day (intermittent collection) in winter, up to a maximum of 10,000 litres per day during the peak season in spring/summer. He rated his business as mid-sized within the local industry, and he sold his cheese throughout Turkey. Processors collect milk from individual farmers at their farm-gate and transported to the processor's premises for cheese-making. Processors do not have cold storage and milk is not chilled before processing. Dairy farmers met during the mission stated they were unlikely to utilise MCCs, mainly because the MCCs would only pay monthly after milk delivery, whereas processors paid in-advance. They questioned the location of MCCs in proximity to townships and they considered MCCs would struggle to compete against processors, who also sourced the majority of their milk supplies closer to towns. The farmers considered MCCs were required in more remote areas of their districts, where smallholder farmers need to travel some distance to sell their milk to traders ie. where processors do not travel to buy milk at the farmers' gate.

15. The MCC owners are relying on a Ministerial decree (2015) that bans un-chilled fresh milk transportation to be enforced, which would necessitate local processors purchasing their milk supplies through MCCs rather than at the farm-gate. The decree also forces all dairy farmers to join a registered association or union, which provides farm services, such as artificial insemination. Milk processors met during the mission were aware of these requirements, yet were sceptical the law would be enforced. The Associations and PMU had not completed the business analysis for milk collection and distribution for these centres as requested by the previous mission.

16. The capacity of each Association to deliver chilled milk that is competitive against existing distribution networks is questionable. Association officials claimed to have a social obligation to support local farmers, as they considered the existing advanced payment system utilised by processors to 'forward contract' farmers to supply milk to be dis-advantageous to farmers. But the volume capacities of each MCC (4,000 litres) means they will be insignificant contributors to the overall daily volume of milk supplied and distributed during the season. It is difficult to envisage how each Association can reach economically-viable volumes of supply without constructing more MCCs to provide a commercial network of facilities located throughout project districts.

17. Government food safety concerns and regulation have helped transform milk distribution in other dairy areas of Turkey, mainly in partnership with the private sector. However, these concerns are more targeted at the fresh milk market, rather than processed milk industries, such as cheese-making prevalent in project areas. The local milk industry in project districts could eventually be transformed, once chilled milk collection reaches commercial scale and becomes competitive against existing un-chilled milk collection in project areas. The lack of private sector investment into MCCs serves to limit the expansion of the network and transformation of the local industry. This is a major weakness in the government's MCC business model, and the lack of profitability motive will affect the short-term sustainability of these MCCs. However, despite misgivings, the project should support the MCCs during the final year of the project, so that each centre has sufficient support to operate a potentially profitable business.

Recommendation:

- support each MCC with targeted technical assistance during the 2017 Spring and six-monthly truck contracts

18. **Sub-Component 1.2. Improvement to Horticulture Practices** is targeted at farmers living in agro-ecological pockets of the three project provinces suitable for orchard and greenhouse vegetable production. Posof (Ardahan) district was added during 2015 as a horticulture target district. An estimated 80-90 percent of fresh fruit and vegetables was imported into project provinces from more-established horticultural growing regions of Turkey. Smallholders in project areas currently practiced open-field production of vegetables in high demand in local markets, and greenhouse production was becoming more widespread.

19. AKADP design indicated that further advances in horticultural production and productivity in the three provinces of the project area were limited by: (i) the affordability of quality, disease-free seeds and seedlings of new, improved varieties; (ii) the affordability of greenhouses which would off-set short growing seasons and also allow cropping intensification; and (iii) lack of sorting, packaging and storage skills and facilities. These bottlenecks not only adversely impacted local incomes but also on local diets and nutritional status because fruit and vegetables, were mostly imported and consequently expensive. Therefore, promotion of modern greenhouse and off-season vegetable

production, combined with more efficient drip-irrigation, provides opportunities for smallholders in project areas to become more productive on their small plots and increase their household incomes.

20. **Output 1.2.1. Farmer trainings and visits on sustainable orchard technologies.** Planned training by horticulture experts during autumn 2015 to 124 farmers in Artvin and Kars was cancelled and DDA 'experts' conducted the training instead. Further training for farmers in Artvin and Kars on 'sustainable horticulture practices' were completed in Artvin for 23 farmers and two PDA staff. Similar training for Kars farmers was completed in October 2016. A lack of information and monitoring data on these training courses means an evaluation cannot be completed on the efficacy of the AKADP training program during 2015/16 for orchard production. It was obvious during mission field visits that P/DDAs in horticulture project districts need support from industry specialists, so orchardists and vineyard growers can receive expert assistance:

- Orchard lay-outs need to be established in order to provide maximum productivity and returns to growers.
- Young fruit trees and vines needed to be properly planted, pruned and managed to provide a sound framework for the life of the orchard or vineyard.
- Good agriculture practices developed and disseminated to farmers in order for them to obtain the maximum potential from their orchards.

21. This will become imperative next year, as the number of farmers for orchard co-financing peaks and becomes a major activity for project teams in horticulture districts. Farmers and DDAs need high quality technical support from industry experts. PMU should organise in-field demonstrations for all farmers in a particular district so that the maximum number of growers can be trained so that they implement improved agriculture practices in their orchards and vineyards. These demonstrations should also present improved lay-out of orchards with efficient drip irrigation systems aimed at delivering to farmers maximum productivity from their orchards.

22. Farmers met during the mission were practising rudimentary sorting, cleaning and packaging of their fresh produce for sale to local traders. Improved post-harvest handling of fruit and vegetables needed to be included in training activities, to help farmers reduce spoilage of their produce and increase returns to growers able to deliver higher quality fresh produce to local markets.

Recommendation:

- In-field demonstration of improved orchard and vineyard production practices by industry specialists delivered in project areas to demonstration and co-financed orchardists and vineyard growers, plus other non-project farmers who may be interested in horticulture production (rather than the usual project training of sending limited numbers of farmers to research institutions or other training facilities in different areas of Turkey).
- Training on improved post-production practices.

23. **Output 1.2.2. Modern orchard and greenhouse construction.** Demonstrations and co-financing programs continued in the project districts, and Posof was added during the year. Three rounds of co-financing conducted in Artvin and Kagizman (Kars) since the last IFAD mission in 2015, resulted in 189 farmers spanning 1,300 da of land accepted for financing during 2016 and 2017. Additionally, 98 applications for greenhouses will be financed during the same period. In Posof, four orchards of 20 da each and four 200 m² greenhouses were demonstrated during the previous season. Calls for co-financing during 2016 produced only one greenhouse application. Five open-field demonstrations of strawberry production in Ardanuc and Artvin districts (Artvin) were demonstrated in 2016, and calls for co-financing will commence during 2016. Blueberry open-field production demonstrations were completed on 7.6 da for four farmers in Cildir district (Ardahan) and a co-financing program will also commence in late 2016 in the area.

24. **Output 1.2.3. Modern orchard demonstrations.** The orchard demonstrations established during the past two years and visited during the mission in Kars and Ardahan were poor quality. Farmers were not adequately advised during establishment of their orchards and lay-outs were not designed to provide maximum productivity returns. Approximately, two-thirds of establishment costs were expended in overly-elaborate border fences, mainly for excluding wandering livestock. Orchards were weed-infested, and drip irrigation lines overgrown and blocked. Fruit saplings were struggling to compete against weeds. There were questions whether the water pump/fertigation/filtration systems supplied by the project were understood and being used by farmers. AKADP project teams had not

developed any good agriculture practices for general implementation by orchardists, nor had they introduced the safe use of chemicals as part of these good agriculture practices for each fruit variety promoted by the project.

25. There was strong drive among P/DDAs and farmers to grow their produce organically. While this is a worthy goal, organic farming required increased labour inputs by orchardists, which was not apparent in the orchards visited during the mission. Also, the project had not delivered training on a key activity of the project – Integrated Pest Management, which complements organic farming. The project design indicated that training and demonstrations in the proper use of agro-chemicals would constitute a major activity, including distribution of knapsacks for spraying herbicides and pesticides for smallholders, however, these activities were not addressed by the project team.

	Land (da)					No. Farmers				
2015	Spring		Autumn			Spring		Autumn		
Co-financing	Kars	Artvin	Kars	Artvin	Total	Kars	Artvin	Kars	Artvin	Total
Orchards/vineyards	268	24	290	203.5	785.5	13	10	14	79	116
Greenhouses	-	2.4	0.74	11	14.14	-	11	2	43	56
Demonstrations										
Strawberry			2.5					5		
Blueberry			7.6					4		
Posof Orchards			20					4		
Posof Greenhouse			0.2					4		
2016										
Co-financing	Kars		Artvin		Total	Kars		Artvin	Posof	Total
Orchards	363.6		155.5		519.1	19		55		73
Greenhouses	22.4		9.5		31.7	5		37	1	43

Table 3. Horticulture Activities 2015/16

26. By contrast, the vineyards and orchards observed during mission visits to Yusefeli (Artvin) were excellent quality. Use of lighter weight galvanised steel for trellising, instead of concrete or wooden posts, will last longer and be easier to move or expand as necessary for growers. These orchards and vineyards were mostly weed-free, which allowed young saplings to grow without unnecessary competition from weeds. Also, drip lines were set above ground to reduce blockages and other impediments to water flow. Border fences were cheaper and more practical with star pickets and wire fencing. The main weakness with these vineyards and orchards in Yusefeli was the uneven growth among young plants, perhaps due to irregular irrigation or fertilisation during key periods of the growing season.

27. Greenhouse demonstrations visited during the mission were of high quality, and vegetable productivity was providing high returns to beneficiaries. The mission visited greenhouses in Kagizman, Posof and Ardanuc; size of greenhouses ranged between 200-500 m² funded through co-financing, and owners produced 2-4 crops per year. Only farmers in Ardanuc had received training on growing greenhouse vegetables. The Kagizman farmer had a strong horticulture background as his family were converting from growing apricots to greenhouse vegetables; and the Posof farmer had been growing vegetables in greenhouses for 15 years from two greenhouses – he received an additional demonstration greenhouse from AKADP⁸. All growers in each project district reported they had no problems selling their fresh produce to local market traders.

28. AKADP had not demonstrated nor promoted plastic tunnels as a potential lower-cost alternative to greenhouses for production of off-season vegetables in target horticulture districts. Such technology would likely be more popular among smallholder farmers, as investment costs through co-financing would be much less than the investment costs of greenhouses promoted by the project. Also, farmers are continuously cropping the soil under their greenhouses, with some farmers growing four vegetable crops per year. Farmers utilise manure between crops to fertilise and add organic matter to the soil. While such organic practices deliver good results in the early seasons, problems with soil fertility will likely increase and adversely affect productivity of growers.

⁸ Posof DDA reported that although this farmer already possessed two greenhouses, he was one of the best greenhouse vegetable growers in the district and would therefore be an ideal role model for other smallholder farmers to learn and replicate his experiences.

29. The project team did not adequately develop good agriculture practices for growing specific vegetable varieties under greenhouses, such as appropriate cropping rotations between vegetable crops; use of leguminous cover crops to add organic matter, nitrogen, and other minerals to the soil; and correct usage of agro-chemicals. The latter was surprising given the inclusion of a fertigation tank in the water pumping package accompanying the greenhouse (and orchards) co-financing program. From observations during the mission and discussions with growers, fertigation was an unknown topic for helping increase productivity of beneficiary farmers.

30. A request made by DDA in Kagizman during the mission for project funding of a cold-store demonstration should be rejected. Such new interventions and major investments should not be introduced during the final year of a project. Moreover, cold storage would likely be non-profitable, as the summer season is short and demand for such facilities limited. Also, it is unlikely that any price premiums from supplying off-season fruit and vegetables in local markets would cover the added cold storage costs. Any such proposals should be supported by rigorous market and economic analysis.

Recommendations:

- Limit AKADP funding contributions to boundary fence costs, at USD 500. If farmers wish to build more elaborate fences than necessary, then they should cover the higher costs.
- Training on greenhouse vegetable production provided to farmers entering co-financing arrangements in 2017 for new greenhouses (and possibly other non-project farmers potentially interested in greenhouse production).

31. **Sub-Output 1.3. Supporting Non-farm Employment** activities were aimed at small and micro-entrepreneurs creating local employment opportunities. Minimal progress was made in component activities relevant to the topic, and PMU continued to include on-farm processing activities, which had been rejected by the previous mission in 2015. AKADP provided 37 demonstration greenhouses (48 m²) to rural women since the project commenced, principally for household consumption. No-one has replicated these greenhouses through project co-financing or their own funds. The mission visited one such greenhouse in Sulakyurt, which was not being utilised, the owner had received no training on growing vegetables and she seemed dis-interested. The project should stop providing further greenhouse demonstrations, and only consider providing them under co-financing arrangements.

32. The Artvin grape juice production initiative could be a viable enterprise to support local enterprise. Local women currently produce the juice at home and of questionable hygiene standards. The project investment seeks to construct six workshops for these local women groups to produce the juice under better production standards and add greater value to their raw produce. Some 20 women will be supported through this activity. The project also proposed to support the establishment of a women's cooperative to produce grape juice, however, insufficient time remains to establish a viable cooperative, and the project should focus its efforts on alternative activities.

33. An initiative to support a local machinery manufacturer (Metlab) in Kars to sell a lower cost silage baling machine to smallholder farmers should be included under this sub-component as it has potential to generate local employment in this industry. Also, young farmers could be included in certain training programs, such as orchard training courses, where they could learn skills such as pruning, laying out orchards, drip irrigation etc. which they could develop as an expertise and help them become orchard industry service providers.

Recommendations:

- Include interested (non-project) young farmers or rural youth in all horticulture training programs so they could potentially develop specialist expertise and provide horticulture farming services.
- Continue support in development of locally-manufactured silage equipment in order to promote local employment.
- Dis-continue efforts to develop a women's grape juice cooperative but construct workshops for these women to produce more hygienically together.

Appendix 10. Working Paper: Component 2 – Village Infrastructure Investments (USD 10.37 million)

1. **Overview:** Investments in village infrastructure aim to support productive investments such as livestock watering facilities; off-farm pipeline distribution networks for irrigation; access roads to upland pastures and self-financed municipality-owned livestock markets. Moreover, the project design considered financing infrastructure that would impact living standards of local communities, including village sanitation networks, wastewater treatment facilities and shepherds' shelters. The mission was informed that the first two activities, despite being included in the 2015 AWPB, had not been conducted by the project as MFAL considers these type of activities are normally the responsibility of other government entities.

91. **Sub-Component 2.1: Establishment of livestock markets.** The project design identified a lack of livestock markets as a bottleneck to sector development. During the reporting period there was a strong focus on livestock markets. The construction of the largest project investment, the Ardahan livestock market, was completed in July 2015. The design, review, approval and procurement process for construction works was completed for livestock markets at Ardanuç (Artvin), Sarıkamış (Kars), Posof (Ardahan) and upgrading an existing market in Hanak (Ardahan). The livestock market at Selim (Kars) built in 2011, will be upgraded to make it compliant with recent regulations. The contractor has initiated works in November 2016 and expects to complete all works within September 2017. However, as discussed by the mission with municipal officials responsible for managing these facilities, none of the markets has established clear provisions for management and operation of sewerage and waste disposal. There was no follow up to a proposal from the ISM of May 2015 to consider building a biogas plant which would help with waste management and decrease energy costs of one of these markets. MFAL should develop comprehensive management, operation and maintenance plans for each market in cooperation with the relevant local authorities that includes estimated costs for utilities, waste disposal, management and operation staff. MFAL should investigate the possibility of involving private service providers and thus improve long-term financial viability.

Recommendations:

- The MFAL should develop specific management, operation and maintenance plans for each of the livestock markets in close cooperation with the local authorities that are receiving these assets after construction. These plans should include estimated costs for utilities, waste disposal, management and operational staff and other operation and maintenance requirements.
- The MFAL is also recommended to look into the possibility of proposing the involvement of private sector service providers to improve quality of services delivery, maintenance and long-term financial viability.

92. **Sub-Component 2.2: Development of livestock water supply facilities.** Given the topographic conditions of upland range lands where livestock graze during summer, easy access to drinking water is often a problem. Building conveyance systems and troughs is therefore in high demand, and the project constructed a number of LWF through SPAs. The mission confirmed the importance of these facilities and the positive impact reported by beneficiaries and PDA staff. They highlighted the increased weight gain by livestock. All LWFs constructed utilise surface water and the mission discussed a recommendation from the 2014 ISM regarding piloting solar energy pumps for using shallow groundwater where feasible. The project conducted a generic geo-physical study which indicated the presence of shallow groundwater in some of the targeted upland pastures, thus avoiding the need for long conveyance systems. The PMU should identify as many as possible LWF to be included in the next AWPB and hire a consultancy firm to conduct detailed geo-physical studies of potential LWF areas and design solar-powered pump cum well system to pilot the technology in the region and then then engage a local well-drilling company to install the system.

Recommendations:

- Given the number of potential beneficiaries from each LWF and the immediate positive impact registered, the project is advised to identify LWF with high potential impact, to be included in the 2017 AWPB;
- The project should hire a consultancy firm to conduct a detailed geo-physical study of potential areas and design a solar-powered pump cum well system to introduce, on a pilot basis, the technology in the region. The PMU will then have a local well-drilling company installing the system. The later contract should be signed within May 2017.

93. **Sub-Component 2.3: Rehabilitation and construction of pasture roads.** During summer months herders take livestock to upland pastures for approximately four months. They transport milk daily to markets with considerable losses in quantity and quality. Project design included support to construct new roads or improve those existing. Throughout implementation this has been an important activity in all three provinces conducted through SPAs. This activity is appreciated by stakeholders, as confirmed by the mission, and explained by beneficiaries using these roads. During preparation of the 2017 AWPB, the rehabilitation and construction of pasture roads should be prioritised in areas where Component 1 is active.

Recommendations:

- During the preparation of the next AWPB, the rehabilitation and construction of pasture roads should be prioritised in those areas where Component 1 has already implemented activities or is planning to have activities in the next year. This is a criteria foreseen at the project design and given the imminent completion of the project, it is important to make sure that the complementarities between components materialise.

94. **Sub-Component 2.4: Rehabilitation and construction of livestock facilities.** Cattle Handling Facilities that allowed systematic targeting for animal health improvement were piloted by the project. The mission was informed about recent stealing of livestock in the area and some farmers were wary of using these facilities as they think they may facilitate the actions of robbers. The mission noticed there was a need to improve the quality of construction and maintenance of these facilities.

95. **Other village infrastructure: Construction of shepherd shelters in upland pastures.** The 2016 AWPB included 20 shepherds' shelters. However, delays in design preparation and approval and in the procurement process resulted in contracts only being ready for the facilities to be built in spring 2017.

96. **Improved Off-farm Irrigation:** The project design considered investing in off-farm piped networks for irrigation, however, only one system has been identified in Artvin. UNDP procured pipelines and their installation is being organised through the SPA. The new system will have a pipeline for conveyance and will deliver through hydrants, to which farmers will be able to plug pressurised systems or continue to convey water to their fields through open canals. The system irrigates 24 hectares and benefits 138 farmers. The project should identify further opportunities for investing in improving existing irrigation systems or developing new systems if studies have been conducted, so that tendering can be carried out before May 2017.

Recommendations:

- Given the climatic conditions in some of the project districts, it is difficult for farmers in those areas to move towards commercial agriculture without securing water for irrigation. The project should actively identify opportunities for investing in improving existing irrigation systems or in the construction of new ones if studies have already been conducted and tendering can be carried out before May 2017.

97. **Quality of Civil Works and Supervision:** The mission considers the quality of civil works of the Ardahan LSM completed in July 2015 to be adequate with only minor shortcomings already identified by PMU. However, supervision arrangements for on-going works and for works carried out by SPAs are not adequate. Site supervision currently provided is limited given the fact that PMU has only two engineers performing several tasks. Likewise, the SPAs have limited staff to perform proper site supervision of civil works. At the time of the mission, the PMU was in the final stages of engaging a Consultant to perform on-site supervision for on-going civil works. As part of the 2017 AWPB works

that will be carried out by SPAs, the project should make more emphasis on provision of proper supervision.

Appendix 11: Request for inclusion of Damal District

REPORT FOR REQUESTING TO INCLUDE DAMAL DISTRICT IN THE SCOPE OF ARDAHAN-KARS-ARTVIN DEVELOPMENT PROJECT (AKADP)

Damal is located in becoming neighbour with Posof district in North, Georgia and Çıldır district in east, and Hanak in south and west. Damal district enriches Ardahan Province with its social and cultural features.

Geographic position of Damal is a plateau and the main income source is livestock husbandry. There are 1,585 livestock enterprise with 17,851 animals (90% is bovine) and 1,172 plant production enterprise too, according to 2016 data. All these enterprises are small family-run businesses.

All the other districts of Ardahan, excluding the center of Ardahan and Damal district, are play a part of AKADP application area. Damal is the solitary district which is not included by AKADP. This circumstance causes the farmers to feel derelict, and influences in applying the other services of our Provincial Directorate negatively. There is a huge demand of the district to be included in the Project.

Damal district is on the 795'th rank in 872 districts countrywide in developmental sequence. This situation indicates the need for economic development and support of the district.

Effects of the traditional lifestyle is seen in the district presently with the main indicator of nomadic life and the Turkmen women clothes with Middle Asia ornaments worn by women above 45-50 years old. The local women are producing and marketing the dolls with this traditional clothes (called Damal Doll) in the courses opened by the cooperation of Damal District Governorship, Union of Village Delivery Service and Public Training Center. Conservation and improving of this tradition will be supported by AKADP when it is included in the Project.

In addition, the silhouette of Atatürk reflecting on the slopes of Karadağ can be viewed between the dates of June 15 and July 15. Domestic and foreign tourists are visiting the region on the dates specified. The activities will be carried out under AKADP to benefit from this natural event taken place annually in terms of rural tourism and increase the number of visitors.

Name of Settlement	Population
District Town	3,882
Burmadere Village	914
Dereköy Village	251
Eskikılıç Village	480
İkizdere Village	163
Otağlı Village	549
Seyitören Village	701
Tepeköy Village	168
TOTAL	7,108

When we consider all the given aspects above, we have reached the conclusion that it would be compatible to include Damal District in Ardahan- Kars-Artvin Development Project. 15.11.2016

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