

# **Swiss Agency for Development and Cooperation – SDC**

## **External Review:**

**Livestock Development in the South of Armenia Project (Phase 4)**

**Livestock Development South- North Project (Phase 5)**

## **Final Report**

**Review undertaken May to June 2019**

**Undertaken by:**

**Gavin Anderson, Independent consultant**

## **Acronyms used**

<b>ADA</b>	<b>Austrian Development Agency</b>
<b>GoA</b>	<b>Government of Armenia</b>
<b>M4P</b>	<b>Making Markets Work For The Poor</b>
<b>MSD</b>	<b>Market Systems Development</b>
<b>SDA</b>	<b>Strategic Development Agency (NGO)</b>
<b>SDC</b>	<b>Swiss agency for Development Cooperation</b>

## CONTENTS

<b>1. Project background and context .....</b>	<b>3</b>
1.1 Review approach and methodology .....	4
1.2 The project's design and focus .....	6
<b>2. Overall findings of the review .....</b>	<b>8</b>
2.1 Livestock development in the South of Armenia Project .....	8
2.2 Livestock development South-North Project (Northern Livestock Project) .....	10
<b>3. Detailed findings of the review .....</b>	<b>13</b>
3.1 Relevance of the intervention .....	13
3.3 Appropriateness of the M4P/MSD approach .....	16
3.3 Efficiency and effectiveness of the projects .....	17
3.4 Impacts of the projects .....	20
3.4.1 Impact performance of the Southern Livestock Project .....	20
3.4.2 Impact performance of the Northern Livestock Project .....	26
3.4.3 Impact of the projects on rural migration .....	32
3.5 Sustainability of the interventions .....	32
3.6 Collaboration and key stakeholders of the project .....	36
3.6.1 Collaboration with local government .....	36
3.6.2 Collaboration with donor projects .....	37
3.7 Mainstreaming transversal themes in the project .....	38
3.7.1 Gender .....	39
3.7.2 Governance .....	39
3.7.3 Disaster Risk Reducton – DRR .....	40
<b>4. Conclusions and recommendations .....</b>	<b>40</b>
4.1 Main conclusions of the review – Southern Project .....	40
4.2 Main conclusions of the review – Northern Project .....	41
4.3 Key recommendations of the review for future interventions .....	41

## ANNEXES:

**Annex 1: Impact Matrix: Livestock development in the South of Armenia**

**Annex 2: Impact Matrix: Livestock development South-North Project (Armenia)**

**Annex 3: Future ownership of the Syunik Animal market**

**Annex 4: TORs for the review**

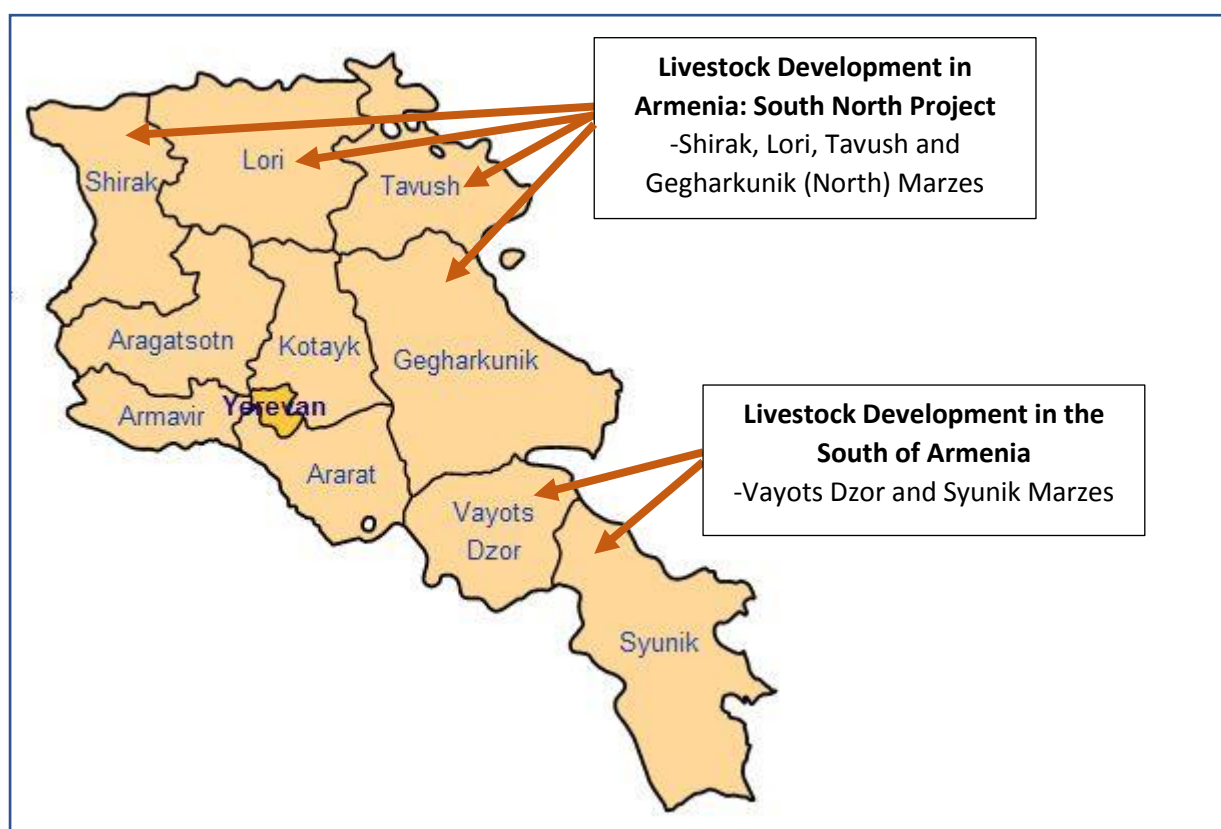
**Annex 5: List of most important documents consulted**

**Annex 6: List of interviews**

## 1. Project background and context

Inclusive and sustainable economic development is one of the two domains of the Swiss Cooperation Strategy for the South Caucasus of 2017-2020<sup>1</sup>. The strategy focuses specifically on improving agricultural value chains, supporting rural SMEs, improving framework conditions and exploring opportunities to foster cross-border economic initiatives.

In this context, the Swiss Cooperation Programme in Armenia has continued and expanded its support for the rural Armenian livestock sector. Two major projects have been developed one focusing on administrative areas (marzes) in the south of Armenia (Vayots Dzor and Syunik) and one on the north of the country (Shirak, Lori, Tavush and Northern Gegharkunik) – see map 1. These projects are being implemented by Strategic Development Agency (SDA) an Armenian NGO and consulting organisation with headquarters in Armenia's capital Yerevan.



Map 1: Project areas for the Livestock projects in Armenia

### 1) Livestock development in the South of Armenia

This project focuses on the two most southerly Marzes (administrative districts) of Armenia, namely Vayots Dzor and Syunik. It is a continuation and extension of projects that have been running since 2016 and is in its fourth phase.

- The first phase of the project was from 2006 to 2008 (CHF 300,000) and focused on the Goris area of Syunik Marz with a more limited focus on the dairy sector and specifically access to the milk market, vet service points and improved animal care practices among farmers.
- The second phase from 2008 to 2011 was an expanded programme that focused on both the meat and milk sectors building greater market access, expanded access to services, local

<sup>1</sup> Swiss Cooperation Strategy 2017-2020, SDC 2016

governance and farmer skills and knowledge. The coverage expanded to 16 'distant' rural communities in the Goris area of Syunik Marz with a total of 3100 households (13,600 people). This project then expanded from Goris to the Sisian division of Syunik Marz (combining with an SDC funded project that had to that point been implemented by Accion Contra el Hambre – ACH). This increased the project coverage to 24 additional communities in Sisian and the projects coverage to 7,000 households (31,000 people) in 40 rural communities

- The third phase from 2011 to 2014 continued the focus on the Sisian and Goris divisions of Syunik Marz deepening its activities in the livestock sector and on the meat and milk value chains
- The current fourth phase, which is scheduled to operate from 2014 to 2020 (6 years), was significantly expanded geographically to include additional communities in Syunik and expanded into the neighbouring Vayots Dzor Marz. This phase of the project works with 100 target communities with nearly 60,000 population.

All of the phases of this project have been funded exclusively by SDC.

## 2) Livestock Development in Armenia: South-North Project

The South-North project refers to the project's regional focus on cross border synergies and trade between Southern Georgia and Northern Armenia. This Northern Armenia project is also implemented by SDA while an SDC funded project in Southern Georgia (ALCP Project) is being implemented by Merceycorps. The 3 year Armenia project is being jointly funded by SDC (60.3%) and the Austrian Development Agency (ADA – 30.4%) with other contributions from local stakeholders. The project expanded from a smaller livestock project operating in 12 communities (9 in Tavush and 3 in Northern Gegharkunik) that was funded by ADA

In order to avoid confusion, from this point forward this report will refer to the projects as the 'Southern Livestock Project' (Vayots Dzor and Syunik) and the 'Northern Livestock Project' (the Northern Marzes) – or southern project and Northern project for short.

**Table 1: Key-facts of the two Livestock projects in Armenia**

	<b>Southern project</b>	<b>Northern project</b>
Project timeframe	1 <sup>st</sup> September 2014 – 31 <sup>st</sup> August 2020 (72 months)	1 <sup>st</sup> December 2017 – 30 <sup>th</sup> November 2020 (36 months)
Project duration	6 years (72 months)	3 years (36 months)
Project phase and timing	Phase 4 – of projects starting in 2006	Phase 1 (although project expanded from a small ADA funded project in Tavush Marz)
Overall budget	CHF10,000,000	Eur 4,938,320 (about CHF 5,500,000)
Funders	SDC	SDC (60.3%), ADA (30.4%) + other
Number of communities	100 communities	88 rural communities
Number of people in communities	60,000 people	85,000 people
Target number of beneficiaries and target	14,000 farmers and rural businesses income increase of 30%	20,000 farmers and rural businesses increased by 15%

## 1.1 Review approach and methodology

The External project review was undertaken by independent development consultant, Gavin Anderson between late May and late June. The consultant had previous knowledge of the livestock

projects in Armenia having provided consultancy inputs to SDC under the framework agreement with The Springfield Centre between 2008 and 2015 to provide project design and advisory support to SDC's income and rural economic development portfolio into the South Caucasus.

The external review involved:

- Desk research – reviewing project documents and reports
- Field assessment from 26<sup>th</sup> May to 10<sup>th</sup> June which primarily focused on interviews with project partners, stakeholders and rural beneficiaries
- Impact review and desk-based assessment
- Preparation and finalisation of the review report

### **Scope of the review:**

The external review focuses on both Livestock Projects in Armenia:

- Southern Project: The review is being undertaken in the 5<sup>th</sup> year of the 6 year project (phase 4) and with 14 months of the project remaining.
- Northern project: The review is being undertaken as a mid-term review, 17 months into the 36-month project.

The review was commissioned as a broad ranging assessment of the effectiveness and relevance of the projects, their impact, sustainability of their interventions and broader lessons for existing and future intervention.

### **Structure of the external review report**

The findings of the research are presented in this report in four sections:

- 1) The first section provides a comparison of the similarities and differences in the design and focus of the two projects to enable a more coherent assessment of the project interventions.
- 2) The second section provides an overview of the findings of the external review and acts as a summary of the review findings. This section presents the findings for each project separately.
- 3) The third section provides a more detailed analysis and assessment of the projects based on the key questions presented in the external review terms of reference.
- 4) The final section provides the conclusions, lessons and recommendations for future interventions in livestock

An impact summary matrix is provided for each project (Annex 1 and 2 to this report) and provides an overview of impact versus current achievements and an assessment of the progress of these against targets in the project logframe.

## 1.2 The project's design and focus

The overall goals of the projects are defined as follows:

Southern: Increased Economic opportunities and incomes of male and female farmers involved in animal husbandry in Syunik and Vayots Dzor marzes.

Northern: Contribute to inclusive and sustainable agricultural growth of livestock-dependent rural communities of Armenia through Facilitation of private sector development and intensified cross-border economic relationships

### Similarities in design and focus

Both projects have been designed with similar focuses and objectives:

- A focus on 'inclusive economic development': the rationale for both projects are based on addressing rural poverty and weak economic growth and development in rural areas. Addressing poverty and income disparity is an explicit rationale for intervention.
- Focus on livestock, cattle and the meat and dairy value chains: both projects focus on developing then livestock sector and specifically on the cattle milk (dairy) and meat markets/value chains.
- Market Systems Development (MSD) / Making Markets Work for the Poor (M4P): Both projects also explicitly adopt and apply a MSD approach – articulated in both projects as M4P. M4P is a market systems development approach that explicitly aims to focus on addressing weaknesses of market access for poor households as farmers, businesspeople and consumers. This approach can be characterised as emphasizing the following:
  - Facilitation- development actors (the projects) acting as a catalyst for permanent market actors to more effectively deliver services / operate in the market value chain rather than the project directly delivering services, paying for services to be delivered or performing market roles themselves.
  - Sustainability: An explicit and well-defined approach to ensuring the continued operation and growth of essential market functions (such as service delivery and roles within the value chain)
  - Replication and Crowding-in: Ensuring that the market functions that are created or enhanced are more than merely sustainable themselves but lay the foundation for a growing and competitive market for services and products/produce.
  - Intervening at multiple points within the market system: A market system development approach recognises that there is no single 'silver-bullet' (entry point) to unlocking growth and increased inclusivity in markets and therefore intervenes at multiple points within the market system.
- Similar intervention points and project activities: the large majority of intervention points are similar in both projects with only a small number of intervention areas that are different (summarised in table 2)
- Similar intervention logics and rationale for intervention: Both projects have strong and similar impact logics that clearly explain the rationale for intervention and the hypothesis for impact. These impact logics are based on the same hypothesis for generating impact at farm income level.

**Table 2: Comparison of project intervention areas between the Northern and southern projects**

Project focus	Southern Project	Northern Project
<b>Milk Market</b>		
- Milk collection points	Yes	Yes
- Milk Processing companies expanding production	Yes	Yes (strong)
- Lead farmer model for milk collection	No	Yes
- Export plans for milk processors	No	Yes
<b>Meat Market</b>		
- Meat buyers	Yes	Yes
- Animal market	Yes	No
<b>Animal replacement</b>		
Animal replacement service	Yes	Yes
<b>Farm support services</b>		
- Veterinary service points	Yes	Yes
- Artificial Insemination services	Yes	Yes
<b>Access to finance</b>		
- For farmers (value chain financing)	Yes	No
- For processors (expanding production)	Some focus	Yes (strong focus)
<b>Farm inputs</b>		
- Farm input service provider (expansion)	Yes	Yes (including cross border)
<b>Farmers capacity and training</b>		
- Farmer training and capacity building	Yes	No
<b>Working on local governance</b>		
- Pasture management	Yes	Yes
- Data management	Yes	Yes

### Key differences in the focus and design of the two projects

There are nevertheless some differences in the design, focus and approach of the two projects that are important to highlight

- Length of the project intervention: The Southern project is 6 years in duration while the Northern project is only 3 years – half the length.
- Phase of the project: The Southern project is a mature project in its fourth phase of operations and has had activities and established relations and infrastructure in the area since 2006. The Northern Project is in its first phase and has only been established in most of the area since 2018.
- Export and cross-border orientation of the Northern project: The Northern project has an explicit focus on generating cross-border synergies, market linkages and export markets with Georgia
- Focus on larger service providers and value chain actors in the Northern project: with a stronger focus on working with processors and lead farmers.
- The Northern Project has less focus on working directly with farmers compared to the Southern Project: there is little focus on direct training and capacity building with farmers and less on embedded or value chain training and support services with farmers.
- More grant focused in the Northern Project: The Northern project provides more grant funding (to processors and lead farmers).

- Choice of target communities and working with more fragile communities: The way in which communities were identified, and the geographic differences between the North and the South has resulted in the Northern project tending to work with stronger farming and livestock communities.

## **2. Overall findings of the review**

### **2.1 Livestock development in the South of Armenia Project**

#### **Project design and relevance of the project**

Livestock and specifically cattle is arguably the most important economic sector in rural Armenia. Cattle is particularly important in the rural areas of Syunik and Vayots Dzor Marzes . The focus on cattle is highly relevant to rural economies, rural livelihoods and poverty reduction in these rural areas. It is therefore an appropriate sector for intervention focus. The reliance on cattle in rural economies and the price volatility of dairy in particular raises some concerns around the lack of economic diversification in rural areas, but this project is clearly contributing to reducing volatility in this market and ensuring greater economic participation of smaller households. The focus of the project on both the dairy and meat markets strengthens the project by providing options for farmers to swap between meat and a dairy focus and for more remote communities that have little access to formal milk markets to focus on meat.

The project expansion in phase 4 has resulted in the project working with many weaker and remote villages – rather than focusing on villages with high existing participation in cattle rearing. This has resulted in a pro-poor focus in these communities with the project responding appropriately and flexibly to the unique challenges of each village.

The Southern Armenia Livestock project has effectively applied the making markets work for the poor (M4P) approach to overall project design. The project intervenes at multiple levels of the market and works in a mostly facilitative role with local market actors (processors, service providers, input providers local governments etc.). This approach is highly relevant to the livestock sector in rural Armenia. It has worked particularly well in the dairy market with a relatively high level of formality (the existence of dairy processors and milk buyers). It has been more difficult in the meat market which has a higher level of informality with few permanent buyers/traders. The pro-poor focus of M4P in this project is very important and has been applied effectively. Nevertheless, the project design (log frame) has not been set up to provide periodic disaggregated data on impacts by income level of households to ensure that the project impact is reaching the poorest. It is recommended that future SDC funded projects disaggregate data to assess enable the projects to more effectively monitor its impact on poorer households and adjust its activities accordingly (similar to gender targets established in the log frame).

The project design has generally been effective at focusing the project on sustainability i.e. that the services and benefits created by the project will sustain after the project ceases. Nevertheless, the project design has not focused strongly on stimulating replication and growth of the services and markets developed. Replication and organic diversification of services has therefore been weaker (see section 3.5 and table 4).

The project design is also weaker in the meat market compared to the dairy market, relying heavily on the set up of a physical animal market in Syunik which was undertaken in a more traditional development approach (direct rather than facilitative) and has resulted in ownership challenges that

remain unresolved (this options for ownership of the Syunik animal market is presented in annex 3). Interventions in the dairy market are more facilitative in nature, which is also a reflection of the more formal nature of the dairy market compared to the meat market.

### **Southern project implementation effectiveness and efficiency**

The project has been effectively implemented by a highly technically competent and dedicated team. The project structure, of a central office in Yerevan and regional offices in the two focal Marzes, has not impacted on the project's ability to be field based and the project has developed extremely strong relationships with local communities and local authorities. The project is perceived as being competent, dedicated, flexible and strongly field oriented by stakeholders at all levels.

### **Overview of the impact of the Southern livestock project**

A detailed analysis of the impact of the project against log frame targets (section 3.2.2) shows that the project has performed well and has already achieved and exceeded many of its output and outcome level targets:

Goal level targets: 2 of the 5 indicators have already been achieved and others appear on target based on mid-term data and evidence from the review

#### Outcome 1: Better functioning milk market:

- Work with milk collection points has performed strongly with 2 out of 3 impact targets met and the third likely to be achieved by the project end.
- Work on the meat market were set very modestly. 1 indicator has already been achieved, a second is likely to be achieved but a third, on number of transactions (farmers buying cattle), is unlikely to be met due to uncertainties around the ownership and future of the Syunik animal market. Performance in this area is not as strong as other intervention areas of the project.

#### Outcome 2: Improved access to farm support services and inputs

- Work on veterinary services has performed very strongly with the set up of 22 new vet points and ongoing improved provision of vet services in 49 points. The project will not quite reach one impact target (in terms of number of veterinary points) but the reason for this is based on commercial and market realities and the fact that vets in a small remote community need to cover multiple villages to have a viable business. The usage of vet services (used by 90% of farmers) already significantly exceeds the target set in the project.
- Work on artificial Insemination has also performed strongly, although the take up in Vayots Dzor was lower than the project expected. 3 of the project targets in AI have already been met and exceeded. Two other project targets are unlikely to be met but the targets on % of cows inseminated (target of 50% of all milking cows) and number of cows born as a result of AI (target was 50%) appear very high. Not reaching these rather high targets should not be perceived as diminishing from the project's achievements in this area.
- Targets for work on access to finance on the other had were set rather modestly with a target of 3 schemes being established and 800 farmers given credit arrangements through a value chain actor. Only 2 schemes were established and only 550 farmers accessed credit arrangements with one scheme reliant on the animal replacement scheme which is not sustainable in the longer term. Targets and performance in this area appear modest.
- Two of the targets on quality inputs in fodder production have already been achieved and exceeded (number of farm support services and value of trade transactions) but the percentage

of farmers using these inputs has not reached the levels anticipated (18% achieved at present on an end of project target of 50%)

#### Outcome 3: Capacities of farmers in animal husbandry are improved

- Work on providing embedded consultancy/extension through value chain actors has focused primarily on services through vets and AI providers (91 of the 116). Targets are being met and surpassed
- Activities to promote advanced practices in animal husbandry overall have met and exceeded the targets set, but the adoption among women remains lower than expected/targeted (only 7% of those were women compared to a target of 30%)

#### Outcome 4: capacities of local self-governance bodies to support rural economic development

Some of the log frame targets in this area have become obsolete due to changes to local governance with enlarged communities (a central municipality overseeing a number of rural communities rather than the village mayor structure which existed at the start of the project).

- Targets in improving the data management have either become obsolete or did not have targets established. By mid-project 20 communities and 79 staff had been trained and activities continue and appear relatively successful.
- Activities in improving capacities around pasture management have been successful and have a high profile among local communities. The target for the amount of pasture opened for use has already been exceeded and targets for numbers of improvement initiatives and numbers of communities benefitting are on target to be achieved. The community enlargement process has delayed the roll out of some pasture management plans which will limit the project's ability to measure whether these plans will be fully sustained after their enactment in 2019/early 2020.

#### **Sustainability of the Southern project**

Sustainability was assessed at 3 levels 1) Services/benefits created by the project being sustained 2) These services/benefits diversifying and growing and 3) Services replicated by new non-direct project beneficiaries (see section 3.5 and table 4 for this analysis). The project was seen to have been effective in many intervention areas in creating services that would be sustained after the project ceases, many of these services have potential to grow and diversify organically despite this not being an explicit focus of the project. The potential for the projects to replicate is nevertheless weaker with no targets set or explicit activities to promote self-replication.

There appears to be strong potential for replication of many activities (such as vet points established as businesses, AI services) and the supporting services that would promote replication (such as consultancy/training services for processors, consulting and training on pasture management). Some activities have been undertaken with GIZ to systematise pasture management/upgrading into manuals and create a national forum on pasture management which will promote replication, but these activities were undertaken as a very positive addition to the project rather than a mainstream element of the project design.

## **2.2 Livestock development South-North Project (Northern livestock project)**

### **Project design and relevance of the project**

The Northern Livestock project is only a 3-year project. This is extremely short for an M4P/MSD type project and poses some challenges for leveraging any level of systemic change within the market. The limited timeframe is also a challenge for a project aiming to build export markets and cross

border linkages. This challenge has been exacerbated by civil unrest in Armenia in 2018 and the resulting political restructuring which took place as the project was in the start-up phase.

The project design has many similarities to The Southern livestock project and the lessons and experiences from this project have been transferred to the design of the Northern Project. This has succeeded in allowing a relatively rapid start-up for the project despite political environment challenges. The project has also benefitted from recently established Government support activities to low interest agricultural and Processing loans. This has allowed the project to rapidly launch its work with processors and lead farmers.

The Northern project is different from the southern project in that it focuses more on intermediaries and formal sector actors (processors, lead farmers in particular) and less on farm level interventions. This has resulted in the project appearing less pro-poor than the Southern project. The farm focus in the South (a partial 'bottom up' approach) has resulted in the project working with weaker and more remote communities and households and seeking solutions to their lack of market access and services. The more 'top-down' approach of the Northern project, which assumes benefits will trickle down to end beneficiaries, is likely to result in benefits being captured more by larger farmers and communities that are larger and less remote.

The project does benefit from a strong focus on diversifying dairy production and linking processors to export markets, which potentially mitigates some of the downward pressures on milk prices faced within the Armenian dairy market. This focus on diversification in dairy production and export markets is strongly endorsed.

This project is stronger on dairy than meat markets, which in the context of the North, which is a strong dairy processing area, is logical. Nevertheless, the reliance on dairy market with volatile milk process does present a challenge and risk for the project. Downturns in milk prices can have a rapid effect on farmer investment and therefore impact on the project.

### **Northern project implementation effectiveness and efficiency**

Similar to the Southern project, the Northern Livestock project has a strong, technically competent and dedicated project team that is strongly field based (spending significant time with partners and beneficiaries). The project team have rapidly built good relations with processors, lead farmers and local government authorities in the North. Effectiveness and efficiency of implementation appears high and the project is leveraging from its deeper experience in the south to build synergies and leverage from past experience and success.

### **Overview of the impact of the Northern livestock project**

The project is at mid-term but only 18 months into implementation. Many of the goal level impacts are yet to be measured, but progress on reaching the established targets at outcome and output level appears to be good.

Goal level impact of the Northern project: It is difficult to assess this at this stage with the information currently available. There is no data collated for 6 of the 8 indicators. Nevertheless, activities at output and outcome level suggest that the foundations are being effectively laid to create goal level impact.

### **Outcome 1: Access to local and export milk and meat markets**

- Activities in expanding milk and meat collection/buying have focused predominantly on the milk market but appear to have taken off rapidly with all of the targets appearing achievable.
- The work to develop and implement export plans with meat and dairy businesses also appears to have taken off rapidly with good progress against end of project targets. Again, the focus has been on dairy rather than meat market operators.
- The focus on lead farmers to provide milk consolidation services has only one target (number of lead farmers providing milk consolidation services) and this target is on target to be reached despite it being delayed. It is recommended that the project adds an additional target to this output to measure benefits on small farmers (rather than merely the number of lead farmers establishing consolidation services) or ensures that this is part of the project data collection on work with lead farmers.

#### Outcome 2: improved access to business development services and enhanced regional linkages

- The work on establishing veterinary points has also taken off rapidly and very good progress has been made. Both targets are on track to be achieved by the project end. It is recommended that an additional target be established on usage of vet services (as exists for the Southern Project) rather than merely number of vet points established.
- Activities to establish linkages between wholesalers and retailers (including with Georgia) also appear to be on target. No measurable impact was anticipated by December 2018 but activities have been initiated. Again, it is recommended that an indicator be added on sales rather than merely initiatives and linkages as currently exists in the logframe (otherwise linkages and initiatives could be established but result in negligible sales/increase in access to inputs)
- The Animal replacement activity has started and is on target with a third of the target cattle being sold by May 2019.

#### Outcome 3: Development of sustainable natural resource management

- Activities to improve knowledge and skills to design, operate and improve land management strategies have begun and appear to be on target.
- Work on the implementation of improved land management and environmental practices are connected with the introduction of pasture management plans and are on target.
- There was no target for 2018 for the number of improved infrastructures in pastures, but with the roll out of pasture management plan the end of project target looks achievable (despite increased complexity on procurement procedures with enlarged communities)

The review identified a weakness with a number of logframe targets and outcome/output levels. Many of these targets focus on activities undertaken (e.g. numbers trained, plans developed) or services establishes (e.g. vet points) with no targets that are proxies for impact.

#### **Sustainability of the Southern project**

Benefits, services and structures created and supported by the project generally have a strong potential to be sustained after the project. The strong partnerships with private sector actors (processors, service providers and input providers) suggest a relatively strong potential for these to grow and diversity outside project support. Nevertheless, replication has not been a focus for the project and there is a weaker potential for the services to replicate without activities or supporting services that promote replication.

The diversification, growth and replication of benefits and service provision would be enhanced if additional emphasis was placed on developing supporting services that are within the market (for

example advisory/training/consulting and possibly export support services for processors and consulting advisory on pasture management) rather than these services being delivered purely under the project. The short duration of the project makes a focus on deeper sustainability less feasible and an enhanced focus on replication activities would need to be part of a possible project extension or new phase and is not realistic to focus on during this project phase.

### **3 Detailed findings of the review**

#### **3.1 Relevance of the intervention - focus**

This section provides a more detailed analysis of the two projects and answers the key questions raised in the review terms of reference.

##### **Livestock development focus**

Livestock, and in particular cattle, is the mainstay of much of the rural economy of Armenia providing both income and livelihoods but also a source of nutrition, through milk and cheese, to rural families. A 2017 survey of agricultural households in target communities commissioned by SDC<sup>2</sup> highlighted that cattle was the most prevalently owned animal. Around 75% of households owned cattle - cows, calves, heifers, bulls etc. (25% of households do not own cattle) with 68% owning poultry, 19% sheep and 17% pigs. Interviews with farmers and community leaders during the review also reinforced these statistics and highlighted the importance of cattle for most rural households and also for the least wealthy households who will often have only one milking cow that provides nutrition to the family. This was particularly the case in the Northern Marzes and Syunik Marz in the South, but slightly less in Vayots Dzor.

Cattle livestock rearing is of critical importance to the rural economy and is therefore a highly appropriate intervention point for rural economic development and impacting on rural household income.

##### **Importance of diversifying rural incomes**

The strength of the cattle sector in rural economies and livelihoods nevertheless highlights a weakness and fragility in the Armenia rural economy – the problem of over-reliance on a single sector. The dairy market in particular is volatile and prone to price fluctuations as a result of national and international factors (such as the import and use of milk powder and vegetable oils in milk production). Interviews with farming communities highlight that downturns in the farm-gate price of milk has a significant impact on the whole rural economy and on reduction in cattle stock numbers. The projects diversifying from a focus on primarily dairy farms/cattle to include the meat market is therefore strongly endorsed.

##### **Challenges and opportunities in the dairy sector**

The opportunity of dairy farming as a strong leverage for enhancing rural incomes is reduced by the volatility in the dairy market. This volatility has been an ongoing historic factor in the dairy market but recent downward price trends are major concerns for dairy processing companies interviewed during the review.

While farmers generally perceive current low process in the milk market as potentially a short term dip, cheese processors fear that it is a longer term trend that is a result of an increasing use of cheap imported milk powder and the more recent introduction of new technologies that allow cheese to

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<sup>2</sup> Study of SCO beneficiaries in Rural Georgia and Armenia, ACT, August 2017

be produced using this milk powder and fat content to be replaced by vegetable oils (including coconut oil).

The general consensus is that downward pressure on farm-gate milk prices is a result of retail cheese prices being forced down by cheaper cheese and dairy products in the market that use milk powder and vegetable oils. Local cheese processors are therefore forced to reduce the price of milk at the farm-gate in order to compete with cheaper cheese. This is exacerbated by the lack of an effective differentiated quality market in cheese in Armenia and in its main export markets such as Russia<sup>3</sup>. If the replacement of whole milk by milk powder (and vegetable oils) in mass market cheese production becomes a norm, then the demand for whole milk will potentially reduce and prices will stay low and at a level that farmers perceive the dairy market as uneconomic<sup>4</sup>. This is a significant challenge to the rural dairy cattle sector.

Nevertheless, there are some actions that can mitigate this threat:

- Focusing on higher value quality cheese and niche cheeses (such as European style cheese and speciality cheeses with added ingredients<sup>5</sup>) that do not face the same downward price pressures: the project in Northern Armenia is particularly focused on this and this is also being transferred to the Southern Armenia project). This focus on diversifying to a wider range of dairy products and western cheeses and speciality cheeses is strongly endorsed by this review.
- Opening export opportunities for quality cheese: Armenia has a strong niche in quality cheese production and recent legislative changes and enforcement that has resulted in an increased quality assurance and pasteurisation increased Armenia's potential to build export markets for quality cheeses. An increase in export that results in an increased demand for whole-milk will potentially mitigate downward pressure on milk prices. The export focus of the Northern project is therefore very timely and appropriate to mitigate the impact of potentially reducing prices and demand for milk, although Armenia may need to look wider than Georgia (where cheese is reportedly not a highly quality-differentiated market) and Russia.
- Branding and consumer awareness of whole-milk dairy products: Many dairy processors (as well as community leaders and village authorities) perceive government as being central to addressing the rise in the usage of milk powder and vegetable oils in cheese and dairy production. There is demand among processors (and many farmers and community leaders) for government to reduce imports of milk powder, to tax milk powder imports and to implement labelling of dairy produced with milk powder and vegetable oil. This demand for controls, tariffs and regulations may be unrealistic with Armenia's entry into the EAEU (Eurasian Economic Union which Armenia joined in 2014) and international trade relations. The government has also already legislated to introduce labelling of cheeses made with milk powder, but the letters are reported to only required to be 3mm in size and its impact is therefore highly uncertain.

A more appropriate solution may be a private sector led one, with whole milk dairy producers coming together to develop a whole-milk quality assurance brand and system that is recognised

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<sup>3</sup> Cheese processors perceive that there is a lack of a differentiated market for quality cheeses in major export markets such as Russia, to what extent this perception is accurate is uncertain and potentially requires more analysis.

<sup>4</sup> This view that dairy is uneconomic at current farm gate prices was particularly prevalent in Southern Armenia during the review, and has already resulted in farmers divesting from dairy cattle.

<sup>5</sup> For example, the Yelpin Co-operative Cheese factory is producing small batches of Gouda with walnuts, whisky and Gognac which has a per kilo margin of 1000AMD compared to Armenian Chanakh cheese at 200AMD and Lori at 500AMD per kilo and standard Gouda at 800AMD. After testing these niche cheeses they perceive the market demand as being higher than their production capacity

country wide and promotes whole-milk dairy (this is discussed in more detail in the recommendations section of this report).

### **Challenges and opportunities in the meat sector**

The meat sector provides opportunities to mitigate the negative price fluctuations of the dairy market. Livestock farmers, particularly smaller farmers that have not invested heavily in dairy equipment, can relatively easily move their focus and emphasis from dairy to meat. Nevertheless, the meat market remains highly informal and reliant on either slaughtering animals locally and selling the meat locally or to middlemen seasonally buying animals for slaughter to sell into national markets. Some communities, particularly remote ones with no milk collection from processors, are often more reliant on the meat market and fatten calves for the meat market<sup>6</sup>. The formalisation of the meat market was an objective of the Southern Project in particular with the set up of a cattle market, but the future ownership and operation of this market remains uncertain (the options for this are presented in annex 3 of this report), but farmer interviews during the review highlighted that the project has effectively stimulated the demand for the purchase of high quality (genetically improved and high yielding breeds) of cows and calves. Opportunities in the meat market are in:

- Stimulating increased sales and access to high quality calves for fattening: while this could be undertaken through a physical market, a potentially more appropriate solution could be to establish information platforms where farmers can identify other farms and breeders who are interested in selling calves for fattening and to provide information on their genetic characteristics. This was an interest expressed among farmers in a number of villages in Southern Armenia.
- Addressing the challenge of formalising the meat market: Formalising the sale of (fattened) animals to the meat market remains a challenge for the sector. Meat market development targets for the Southern Project (output 1.2) were relatively modest and revolved primarily around the cattle market rather than the wider meat market i.e impact targets are 2-3 buyers buying from the cattle market, 800 farmers sold/bought cattle from the market, 1400 deals per annum (which is not being met by 2018) and 50% of farmers making an investment in meat production.

The meat market is critically important to diversifying rural incomes and reducing reliance on a volatile dairy sector, but the challenge/opportunity remains to stimulate and formalise both the buying and selling of calves to farmers investing in the meat market and the selling of these fattened animals into the meat value chain.

### **Conclusions on the relevance of the intervention**

The project focus on livestock and both the dairy and meat markets is highly relevant to rural economic development and increasing rural household incomes. While, there is a danger of over-reliance on cattle in rural economies, this is not an argument for not strengthening the most important sector for rural livelihoods. Challenges remain in both the beef and dairy markets. In dairy, the design of the projects to include working with processors on new cheese varieties and export markets are highly relevant to addressing the volatile dairy market in Armenia.

The focus on the meat market is also important in providing alternatives to dairy when faced with downturns in the dairy market. It is also highly relevant in making the project relevant to remote rural communities that have limited or no access to the formal milk market (i.e. they are too remote

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<sup>6</sup> This focus on the meat market was identified in remote communities in the South (e.g Khachik and Bardzuni in Vayots Dzor as well as Shaqi in Syunik),

to be included in milk collection and too small and remote to organise their own milk consolidation and delivery to processors).

## **3.2 Appropriateness of the M4P/ Market System Development (MSD) approach**

As highlighted in section 2 of this report, an MSD approach has the key characteristics of 1) applying a facilitation approach to intervention 2) prioritising sustainability in the services and markets enhanced or created, 3) Laying the foundations and promoting replication and crowding in and 4) Intervening at multiple points within the market. The success of the project in applying M4P is covered in successive parts of the review, but a question posed for the review was whether the application approach appropriate for the meat and dairy sector in Armenia?

**Working at multiple levels of the livestock market:** A recurrent sentiment expressed frequently by farmers but particularly by village authorities and government stakeholders during field interviews was praise for the project for focusing on a number of highly relevant and complementary interventions that are unlocking growth in the livestock sector. Stakeholders contrasted this with other donors, projects and interventions that often tend to focus on a single or a narrow range of intervention points. Another factor praised by processing companies (as partners of the project) was the relevance and importance of the project's involvement at both farm and processing level and interventions that increased both the quality of milk and the productivity of cattle (this was particularly highlighted in the Southern region where the project explicitly works with farmers<sup>7</sup>). These sentiments highlight stakeholders' and beneficiaries' positive response to a systems level approach that is working not merely at the farm level or at the core market level (focusing on the sale of milk to buyers) but also on important supporting services (vet, AI, milk collection, inputs, fodder) and governance (e.g. pasture management and pasture infrastructure)

**Sustainability focus:** A focus on sustainability and facilitation has also led the project to work with established private sector actors (such as processors) and allowed the project to leverage investment and impact through private sector investment. It has also focused the project on establishing services, such as veterinary points, AI services and farm inputs, on a more sustainable basis. The level to which the project interventions have achieved sustainability is discussed in detail in section 3.5)

**An intervention approach of facilitation:** Again, the approach of facilitation is an appropriate one for the Armenian livestock sector. The dairy market is relatively well developed and there are numerous formal actors (such as processors) and potential actors (such as Vet and AI technicians) who are the project partners for the intervention. For the most part the project has taken a strong facilitative approach, but there are some areas where the project has tended to operate more as a service provider rather than a facilitator:

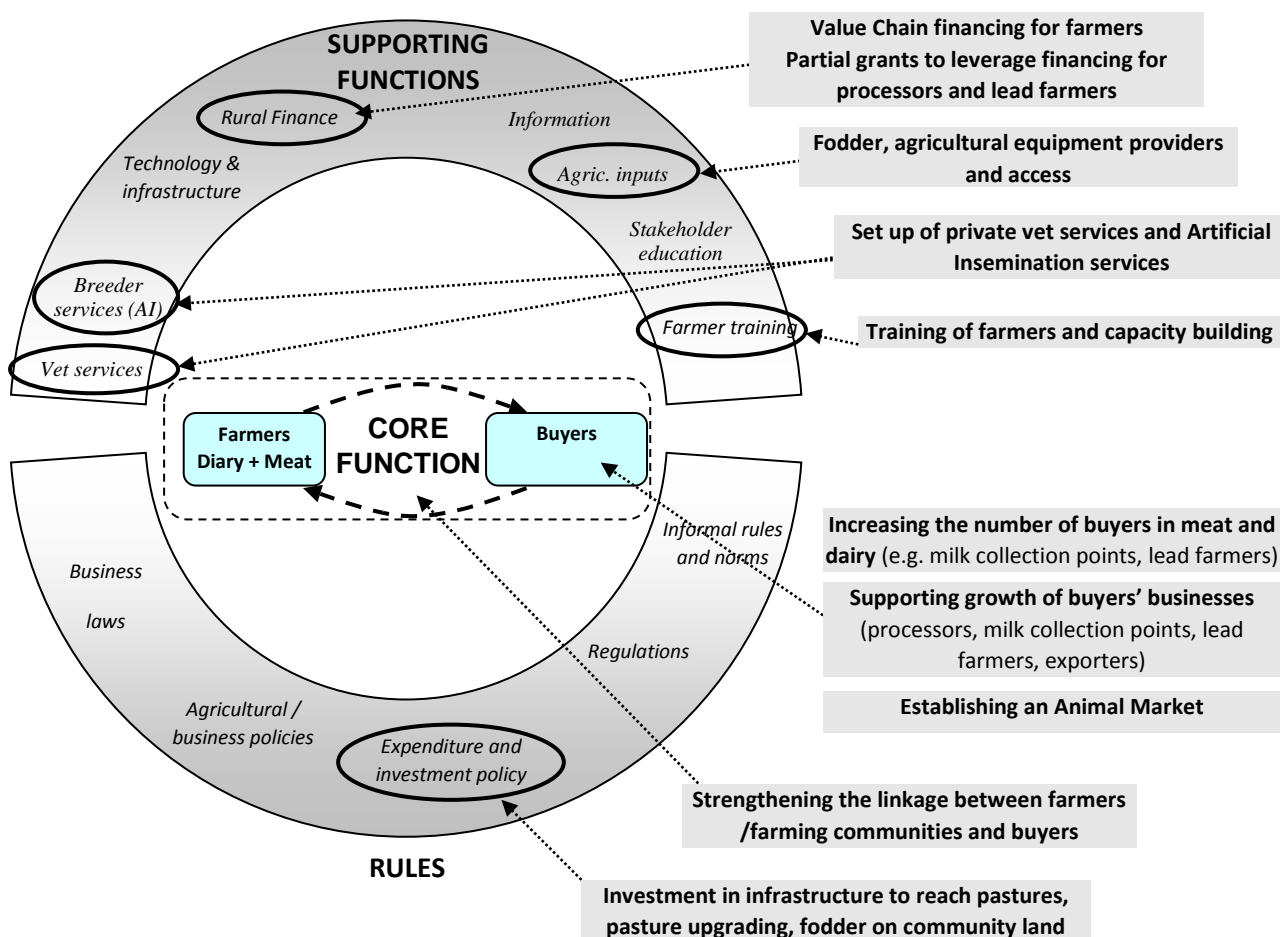
- In the operation of the animal market (Southern Project): this has resulted in a dilemma on the future role and ownership of the market.
- Training and capacity building of farmers (Southern project): which has been undertaken by the project team themselves.

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<sup>7</sup> The Northern project does not work directly with farmers and this is identified in the review as a weakness to ensuring that the project is relevant to poorer and smaller communities and farms.

- In some of the services to formal market actors (e.g. training and consultancy to processors) and local government, there would appear to be a potential to develop this training capacity within the market, rather than purely as a service delivered by the project.

**Figure 1 : The interventions within the Market System**



**Multiple intervention points in the market system:** As illustrated in figure 1, The projects have worked at multiple levels of the market to unlock growth within the dairy and meat market chains. The project design has been very effective from this perspective.

### **Conclusion on the appropriateness of MSD/M\$P in the Armenian livestock sector**

The livestock market in Armenia is a complicated market with both formal and informal actors, an MSD approach is therefore highly relevant to unlocking growth and an explicitly M4P approach (that focuses on poorer farmers rather than just wider systems development) is important in a market that can often exclude remote communities, poorer households, women and marginalised groups. Some aspects of the meat market (the core market – with informality among meat buyers) is more challenging from an M4P perspective.

### **3.3 Efficiency and effectiveness of the projects**

**The project organisational structure:** Both projects are managed from SDA's central office in Yerevan but have regional offices in the main Marzes where the projects operate in the North and the South. Overall project managers and technical managers are located in the central office with

field staff based in the regional offices. This structure appears to work well, allowing the project to recruit high quality senior and experienced technical staff (which would be more problematic if they were to be based permanently outside Yerevan). It also supports sharing of experience, technology and lessons between the two projects.

**Field based approach:** It is also clear that all project staff, both Yerevan and Marz based, spend significant time in rural communities. A recurrent theme of positive feedback from farming communities and local authorities was how much time the project staff and managers spent in the field and in regular meetings with them. This field-based approach was contrasted with other donor projects. Project managers and technical leads therefore have to spend significant time in travelling to and from the communities and Marz project offices, but having senior staff in Yerevan appears to have not impeded a strong relationship and management between the staff and between senior staff and rural communities and local officials.

**Cost Effectiveness and efficiency of the project:** This was assessed during the review on two related aspects 1) Cost effectiveness was the cost versus the impact leveraged and 2) Cost efficiency which is related to whether the project was efficient in using the funds and avoided excess costs.

Cost Effectiveness: The review did not have adequate information to fully appraise the cost effectiveness of the two projects (this would require project data for other similar projects). Nevertheless, an analysis of the project budget and projected impacts shows that the cost per beneficiary reached is CHF167 for the southern Project and CHF 65 for the Northern project (see table 3) which appears modest. The higher level of cost per beneficiary in the Southern project can be explained by the fact that the Southern project is working with smaller and more remote communities compared to the Northern project.

**Table 3: Relative information on cost and projected benefits from the two livestock projects**

	<b>Southern</b>	<b>Northern</b>
Total Project Budget	CHF 10,000,000	CHF 5,500,000
Target number of farmers increasing income	14,000 farmers	20,000 farmers
Overall project cost per beneficiary increasing income	CHF 167	CHF 65
Projected annual income increase per household by the end of the project	CHF 246 (118,175AMD)	CHF 712 342,000 AMD
Total annual income benefit projected at the end of the project (No of farmers x projected annual income increase).	CHF 3,444,000	CHF 14,240,000
Ratio: project budget to projected annual income increase among end beneficiaries (farming households) - projected in project log frame	1 : 0.344	1 : 2.58

For every CHF 1 spent by the project, it is projected that benefits to rural households would be CHF 0.344 for the Southern project and CHF 2.58. for the Northern project each year (based on end of project targets). With a reasonably high level of sustained benefits (as appears reasonable to predict for both projects) the project investment would exceed the income benefits realised at farm level within 3 years in the Southern Project and within the first year of sustained benefit for the Northern

project<sup>8</sup>. It should be noted that there is a large difference between the envisaged leverage of the Southern Project compared to the Northern project. This is perhaps partly because of modest projections for the Southern Project (projections which the project looks likely to surpass) and realistic or possibly optimistic projections in the Northern project. It is also a function of the Southern project working with smaller farmers and more remote communities and also in areas where livestock is less well embedded, whereas the Northern project has chosen farming communities with a strong focus on livestock.

Cost Efficiency: Cost efficiency was gauged on the way that the project is set up and operated. Various factors suggest that the project was overall cost efficient:

- Use of local staff: the project did not employ international staff or consultants and relied solely on local skills.
- Wages in line with the local wage market: It appears that the wage structure of SDA is in line with the local labour market and generally modest.
- Modest offices and efficient staff accommodation: SDA project offices are generally modest and do not incur high recurrent costs. The project has also included rooms for staff accommodation in the office buildings with kitchen facilities to reduce the cost of hotel accommodation and food costs for Yerevan based staff.
- Leveraging local investment: The projects appear effective in leveraging local investment into project activities, particularly with the private sector where grant support was in the vicinity of 20% to 30% with between 70% to 80% investment from the partner (often generated from the partner seeking loan funding).
- Leveraging on other donor investment: The project has also been effective in leveraging on other donor investment – for example Yelpin Village Co-operative which was provided with ENPARD (EU funded UNDP Project) support and Aghjador Village Co-operative which was supported by the USAID ARPI Project. In these examples, SDA effectively added significant value to an investment that had been made by other donor projects.

### **Cross project learning**

The Northern Livestock project is in many ways the extension of the Southern Livestock project to the North of Armenia and as such many of the lessons and experiences of the South have automatically been transferred into the project design for the Northern Project. The synergies of the projects have clearly also extended into the project implementation with sharing of project experience, skills and stakeholder networking. For example:

- Networking and field visits of Veterinarians from North to South and joint trainings
- Annual joint meetings of head of municipalities and heads of communities in the North and the South
- Joint international study tours for processors to Poland and facilitating linkages between processors.
- A young farmers forum bringing farmers from the North and the South together (undertaken once but with potential to repeat)

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<sup>8</sup> Nevertheless, some caution is required in interpreting these figures too literally. The targets of the Southern project appear relatively modest and there is already evidence that targets will exceed projected impact. The targets for the Northern project are more challenging and there is still not enough evidence to prove that these targets will be met within the very short timeframe of the project.

- Joint use of technical experts who have built knowledge in the south and are imparting this to the North – and an emerging sharing from the North to the South (for example in new cheese production and international marketing)
- SDA staff networking on sharing experience and joint problem solving.

The experience and knowledge developed in the Southern Project has been transferred effectively to the North and has resulted in a relatively fast-tracked set up and roll out of project activities despite political turmoil in the start-up phase of the project<sup>9</sup>. This transfer and sharing of knowledge is ongoing and is encouraged as an important synergy for the projects.

### **Performance of the SDA project team**

SDA have a motivated and highly technically competent team that, as mentioned earlier, appear willing to spend significant time within rural communities and interacting with local farmers (in the South in particular where this is more of a focus for the project). The team is also able to operate effectively with larger businesses (processors, lead farmers) as well as local and national government.

### **Performance of the project team in applying the M4P approach**

SDA senior management understand the core principles of an MSD and M4P approach developed by a combination of training (for example at the International Making Markets Work For the Poor Training Programme) and support from MSD experts. The review was primarily undertaken as a field based and stakeholder consultation with some interaction with technical staff in regional offices. The review was therefore unable to fully appraise the level of understanding of technical and field staff on MSD/M4P. One issue discussed with the project teams that has relevance to team performance in applying M4P (and is discussed more in the appraisal of sustainability) is the in house technical capacity. A question for long term market development is the possibility to build technical capacity within the market (for example, consultancy, training and advisory services to processors). While some training and advisory is being undertaken by consultants that are external to SDA, SDA also has a strong internal technical advisory capacity. Locking this capacity within a donor funded project, rather than building the consulting and training as a private service, reduces the potential for companies to use this service in the future or these services to grow and replicate. This issue is discussed further in recommendations.

## **3.4 Impact of the projects**

Annex 1 (Southern) and Annex 2 (Northern) provide impact matrixes detailing all the targets (indicators) at goal, outcome and output level and performance against these targets. Achievements at the last point of monitoring/reporting are noted and the progress is assessed using a colour coding to indicate if the target has been met (dark green), is on target (light green), might not be met (yellow) or is likely not to be met (orange). The following section provides a summary of this appraisal.

### **3.4.1 Impact performance of the Southern Livestock Project**

The 6 year Southern Livestock project is about to enter the final year and is therefore a mature project. The last project impact report was compiled on 28<sup>th</sup> February 2019 and the appraisal of impact is therefore mostly based on data that was collated when the project was 75% completed in

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<sup>9</sup> The public protests from April to May 2018 which has brought about a change of government and ongoing restructuring of government ministries and institutions.

terms of duration. It would be expected at this stage of the project that targets would be 60% to 75% completed (taking into account that impact generally start slow and increase over the duration of the project). Household/farm level impact at goal level was only reported on in 2017, the mid-term of the project, when one would expect to see at least 30 % of impact being achieved with strong proof that the foundations for increased impact have been established.

### **Impact achieved – Overall Goal of the Southern Livestock project**

Goal: Increased economic opportunities and incomes of male and female farmers involved in animal husbandry in Syunik and Vayots Dzor Marzes

<u>Indicator 1</u> : Increased net additional income for male and female farmers from animal husbandry	Mid-term targets in 2017 achieved and exceeded which was 42% of final project target in terms of number of farms/households. Appears on track to achieve final project targets
<u>Indicator 2</u> : Number of male and female farmers/smallholders with improved access to farm support services & markets	End of project targets achieved and exceeded (although more detailed data is required – since reported ‘impact’ is just number of communities worked in and number of cattle households in these communities)
<u>Indicator 3</u> : Productivity of animals increased in 7,000 smallholder farms	End of project target on number of farms 96% achieved and productivity increase levels 65% achieved by mid-term. Appears on target to be achieved and exceeded by end of the project.
<u>Indicator 4</u> : Number of organizational changes in local governance institutions promoting participation and efficiency	End of project targets achieved by March 2019 (this is a poorly formulated indicator and not so challenging)
<u>Indicator 5</u> : Male and female farmers with improved access to local public goods/services (information, communal pasturelands, decision making) facilitated by the Project	81% achieved at March 2019

Overall the project is on course to achieve all its log frame targets at goal level by the end of the project. It should be noted that target 4 was poorly formulated and rather vague and more detailed data on impacts is required to effectively assess Indicator 2.

### Headline impacts reported to date at goal level are:

- At mid-term: Net income of almost 5900 livestock farms/households (15,100 farmers of whom 42% are female) increased by 62% between 2014 and 2017 (final project target is 14,000 farms increasing income by 30%)
- At mid-term: The productivity of cattle in 6,700 livestock farms increased by 13% (Final project target is 7,000 households increasing productivity by 20%)

### **Impacts achieved in the Southern Livestock project at Outcome and Output Levels:**

#### **Outcome 1: Improved access of male and female farmers to better functioning milk and meat markets**

##### Output 1.1 Increased Volume of milk traded through improved raw milk collection infrastructure and efficiency

<u>Indicator 1</u> : Number of MCPs established	16 Out of a target 20 MCPs established at Feb 2019 (80%) and 4 additional MCPs identified to be established. On target to be achieved.
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Indicator 2: Number of milk processing entities increase volume of milk collected from male and female farmers	End of project targets were already achieved by February 2019.
Indicator 3: Number of male and female farmers making investments in milk production	End of project targets were already achieved by February 2019.

Targets around the set up and expansion of milk collection and access to milk markets have either already been reached and exceeded by February 2019 or are on target to be reached.

Headline impacts on access to the milk market are:

- 16 milk collection points established
- Volume of milk traded by farmers to milk processors increased by 1.8 times in 2018 as compared to 2014 (10,750 tons in 2018 compared to 5,868 tons in the baseline year).
- By March 2019 4,680 farms had made investments in milk production (66% of the farms involved in milk production) which on average was AMD 220,000 per annum (CHF 428) per farm.

Output 1.2: Increased volume of meat traded through improved animals/meat market infrastructure and efficiency

Indicator 1: Number of traders/buyers attracted on regular basis.	4 traders/buyers attracted on a regular base. End of project target achieved and exceeded by March 2019.
Indicator 2: Number of farmers/smallholders selling/buying through the Animal Market	725 farmers/smallholders (23% who are women) sold/bought from the cattle market. End of project impact targets 91% achieved by March 2019
Indicator 3: Number of transactions and cash equivalent generated	700 transactions achieved in 2018 (50% of final project target). - No target was provided for cash sales volume.

All of the targets and indicators for this meat market output relate to transactions being undertaken around the physical meat market that has been established under the SDA project. Indicator 1 appears relatively modest and has been achieved and indicator 2 is on target to be completed. Indicator 2 is also being driven by the animal replacement programme and are therefore likely not to reflect total volume of sales that would be generated once subsidies are removed. It is uncertain that indicator 3 will be achieved and there was a drop in average annual number of transactions in 2018 compared to the average since the animal market started (890 deals on average with 700 in 2018). The project explains that this drop and the potential not to meet this target is due to uncertainties in the future and ownership of the cattle market.

**Outcome 2: Improved Access of male and female farmers to farm support services and inputs**

Output 2.1: Efficient veterinary services are available for male and female farmers/smallholders

Indicator 1: Number of veterinary points established/improved	49 vet points, of which 22 were new, established by February 2019 – 88% achieved for total vet points and 73% completed in terms of new points compared to end of project targets. Unlikely to be fully met within the project.
Indicator 2: Number of farmers used veterinary services	Targets met and exceeded

The project is unlikely to fully meet its targets in terms of new veterinary points established (22 points established rather than the 30 anticipated – 73% completed by February 2019). The project anticipates opening 1 to 2 new points in the final year of the project and would thus achieve between 77% to 80% of the total target. Having on average around one veterinary point to every two communities that the project works with (50 veterinary points for the 100 communities) does appear to be a good ratio to ensure viability of the project particularly since the Southern livestock project is working with many smaller and remote communities. This is supported by the fact that 90% of farmers (8260 farms) used veterinary services in 2018 compared to 33% in 2014. The target for number of veterinary points was therefore optimistic and the fact that the project did not achieve this should not detract from the overall success of this component.

Headline impacts reported on establishing veterinary points:

- 22 new veterinary points established under this project phase (by February 2019)
- 49 veterinary points running in total across Syunik and Vayots Dzor.
- 90% of farmers (8,260 farm/households) involved in animal husbandry used these veterinary services in 2018

Output 2.2 Quality/breed of animals improved through access to artificial insemination services and animal replacement

<u>Indicator 1:</u> Number of AI points established.	23 newly established AI service points (target 20 by end of the project) Target met and exceeded
<u>Indicator 2:</u> Number of farmers used AI services.	57% of farmers (4,015 farmers) with cattle used AI services in 2018 (target 50% of milking cows by end of project). Target met and exceeded
<u>Indicator 3:</u> Number of cows inseminated	33% of milking cows inseminated through AI in 2018 (end of project target was 50%) – only 66% of end project target achieved in 2018. Target may not be achieved
<u>Indicator 4:</u> Number of cows born as a result of AI	39% of calves in the project area born as a result of AI in 2018 – target 50% (78% of the end of project target). Target may not be achieved
<u>Indicator 5:</u> Number of cows with improved quality/breed	30% of cows (7380 cows) with improved breed quality. Target met and exceeded

Three of the five targets in the output for improved quality and breed of animals have already been achieved and exceeded. Nevertheless, two additional targets look likely not to be reached although they have been achieved to a large degree. The targets of 50% of all animals being inseminated as a result of AI in the project area and 50% of all cows being born as a result of AI appears to be a high target to achieve, particularly in Vayots Dzor where AI use and awareness and the cattle sector was much less developed than in Syunik. The project has achieved relatively highly in this area despite not meeting all the targets.

Headline impacts reported on improving quality and breed of cattle:

- 23 new AI service points established under this project phase
- 42 AI service points running in the project area.
- 57% of farmers (4,015) farmers with cattle used AI services in 2018 (baseline: 33% of farmers - 2,362 farmers)

- 33% of cows that were inseminated in the project area in 2018 were inseminated through AI (baseline: 24% of cows were inseminated in the project area in 2014)
- 39% of calves born in the project area were born as a result of AI in 2018 (more than 8,000 calves) (baseline: 24% of calves born in the project area were born as a result of AI in 2014 (5,000 calves)
- 30% of cows in the project area have improved quality and breed (baseline: 8% of cows in the project area had improved quality and breed?)

Output 2.3: Access to finance for male and female farmers/smallholders is improved due to alternative VC financing scheme piloted and implemented

<u>Indicator 1:</u> Number of value chain (VC) participants developed and applied advance/credit schemes for finance	2 new VC actors developed advance/credit schemes. (target 3 – 67% achieved) Unlikely to be achieved during the project
<u>Indicator 2:</u> Number of male and female farmers participated in ‘contract farming’ and other VC financing schemes	69% achieved by February 2019 (550 farmers out of an end of project target of 800 farmers) Project suggests that this target will be met by the end of the project

The project has established two value chain financing (advance/credit) arrangements with value chain actors - a cattle buying scheme with Elola CJSC and a farm equipment credit buying scheme developed by an agro-shop to acquire equipment such as milking machines, mills etc. the project does not anticipate that it will achieve the target of 3 VC financing schemes by the end of the project and suggests that this is a result of the uncertain future and incorporation of the animal market. The project believes that it will reach the target of 800 farmers having taken up credit arrangements by the end of the project. The reliance on the cattle market to achieve these goals and its uncertain future suggests a weakness in the sustainability of at least one of these schemes.

Output 2.4: Quality inputs and services for fodder production are available for male and female farmers/smallholders

<u>Indicator 1:</u> Number of farm support service providers making available quality inputs and services to male and female farmers in target area	4 new service providers (target 3) and 10 in total offering improved services End of project target reached and exceeded.
<u>Indicator 2:</u> Number of farmers used farm support inputs and services	18% of farms (1,350 farmers) used farm inputs and services (target 50%) – 36% achieved Target unlikely to be met by the end of the project.
<u>Indicator 3:</u> Number and value of trade transactions and services delivered by suppliers in target villages.	Trade turnover increased threefold in target villages in 2018 (target 20%) End of project target reached and exceeded.

The target for number of new service providers providing inputs and services and the increase in trade turnover have both been exceeded. The target of 50% of farmers using inputs is unlikely to be met during the project and had only reached 18% by February 2019 (increased from a baseline of 13%). This target does look rather high, although an increase from 13% to 18% is modest and indicates this component was not as successful as anticipated.

### **Outcome 3: Capacities of male and female farmers/smallholders in animal husbandry are improved**

Output 3.1: Service/input providers, local extension service providers and other VC participants provide embedded consultancy/extension to farmers in the target area

<u>Indicator 1:</u> Number of service/input providers, local extension service providers and other VC participants provided consultancy/extension services in a sustainable way.	Increased by 49% (target 30%) to 116 service/input providers (including 49 vets, 42 AI service providers, 22 milk collectors, 3 Agro input providers) Target achieved and surpassed
<u>Indicator 2:</u> Number of male/female farmers/smallholders receiving embedded consultancy/extension services	96% of farms/households involved in animal husbandry received embedded services (60% target) Target achieved and surpassed

Both impact targets for the provision of services were achieved and surpassed. These targets are closely allied to the targets for establishing veterinary points, milk collection points and input provision. Services that are being provided include animal breeding and care, animal health and breed improvement, feeding, meat production and milk production. Clearly some service providers would be providing more services than others and some in a more formal and systematic way (quality) but this was not quantified or assessed. The impact reported on number of service providers assumes all established service providers are providing some level of embedded service.

#### Headline impact figure for embedded consultancy/extension

- Number of service input providers offering embedded advisory and extension increased from 78 to 116 (an increase of 49%).
- 96% of farmers received extension services

### Output 3.2 Advanced practices in animal husbandry are adopted by farmers

<u>Indicator 1:</u> Number of male and female farmers applying new techniques and practices in animal husbandry.	2,420 farmers (33% of farmers) adopted new techniques and practices – 7% of whom were women (targets – 20% of farmers of whom 30% women) Overall target met but target for women not met
<u>Indicator 2:</u> Number of new technologies/practices adopted by target groups	3 new technology practices adopted (target 2) - castration of animals - fodder production - application of new farm equipment and feeding Targets achieved and surpassed

The overall targets for the adoption of ‘advanced animal practices’ have already been achieved and surpassed. Nevertheless, the target of 30% of those adopting the practices being women was not met (only 7% were women compared to a target of 30%). Part of the reason for this is traditional gender roles within Armenian farms, but a deeper understanding to the barriers for adoption of new practices among women farmers would be useful. The project has begun to explicitly address this shortfall in adoption among women with activities explicitly targeted at female farmers.

### **Outcome 4 Strengthened capacities of local self-governance bodies to support rural economic development**

Many of the log frame targets under this outcome have been made obsolete by the changes at local governance level and the enlargement of communities (see footnote in the impact matrix – annex 1).

Output 4.1 Improved capacities of local and regional authorities on data management, processing and reporting

<u>Indicator 1:</u> Number of communities improved data management through introducing and operating Community Governance Information System (CGIS)	CGIS introduced in 20 communities by Feb 2017 (end of project target of 50 communities) Obsolete target due to enlargement of communities.
<u>Indicator 2:</u> Number of rural municipalities' staff members trained	79 staff members trained (of which 51% female) No target set in log frame

It was not possible to appraise this based on impact targets due to changed or non-existent log frame targets

Output 4.2: Improved capacities of local and regional authorities on pasturelands usage, planning and management

<u>Indicator 1:</u> Number of communities have developed and introduced pasture management strategies	Achieved in 11 enlarged communities covering 66 target rural communities (target 80 rural communities) – 36 in this phase (target 50 in this phase) – with 22 rural settlements currently developing strategies On target
<u>Indicator 2:</u> Number of communities continued maintaining pasture management system and further developed/expanded those.	63 rural settlements maintaining system by Feb 2019 (target 80 by end of project – 79% complete) On target – but sustained use of the plans will not be able to be measured for those plans being developed in 2019/2020.
<u>Indicator 3:</u> Number of local population (pasture users/farmers, community counsel and staff of local authorities) with improved knowledge and skills to design and operate Pasturelands Management System.	No targets set in log frame
<u>Indicator 4:</u> Number of initiatives/projects developed and implemented by village authorities related to improvement of communal pastures' infrastructure and quality of overgrazed pastures	23,270 Ha of pastures have been made available (target 30,000 by end of project – 77% completed) 72 initiatives/projects implemented to improve pastures On target
<u>Indicator 5:</u> 80,000 Hectares of pasturelands used under improved land management practices	100,000 ha of pasturelands used under improved land management practices (target 80,000 Ha) Target achieved and surpassed

Some of the targets under improved pasture management cannot be appraised due to non-existent log frame targets and there has also been a disruption to this intervention due to the political and governance changes being implemented with enlargement of communities. Nevertheless, this component has been successful in exceeding its target for improving pasturelands (targets already reached and exceeded) and initiating projects with local communities (targets likely to be achieved)

### **3.4.2 Impact Performance of the Northern Livestock Project**

The Northern livestock project is at the mid-point – having completed 18 months of its 36 month (3 year) duration. It is recognised that projects need to establish the foundations for impact in its initial phase and that impact cannot expect to be proportional through the duration of the project. At midterm, one would expect impacts to be emerging and measured and potentially achieving 20 to

35% of end of project targets, but with clear evidence that the foundations for future impact have been put in place (investments made, services improved/established or soon to be launched etc.). It is also recognised that the project was being initiated at a time of political turmoil in Armenia (civil unrest in 2018) and a subsequent restructuring of central and Marz level governance.

### **Impact achieved – overall goal of the Northern Livestock Project**

Goal: Increased Economic opportunities and incomes of male and female farmers involved in animal husbandry in Syunik and Vayots Dzor marzes.

<u>Indicator 1:</u> Enhanced incomes of rural population through agricultural production	No impact collated to date
<u>Indicator 2:</u> Increase in income received from milk and meat value chains	No impact collated to date
<u>Indicator 3:</u> Increased livestock productivity	No impact collated to date
<u>Indicator 4:</u> Number of new jobs created	14% completed Target projected to be reached by end of 2019 with 106 jobs created (13 veterinary, 1 agro-input, 16 additional veterinary and 76 in processing and lead farms)
<u>Indicator 5:</u> Number of entities expanding their businesses	17 businesses by end of 2019 (target 30 businesses - 57% complete) On target
<u>Indicator 6:</u> Progress in sustainable land management	No impact collated to date
<u>Indicator 7:</u> Increased trade turnover (on dairy and animals between Georgia and Armenia.	No impact collated to date
<u>Indicator 8:</u> Rural population with enhanced access to agricultural markets and farm support services	No impact collated to date

A mid-term impact study has not been undertaken to provide data for the farm level impacts at goal level. It is therefore impossible to appraise quantitatively the potential for the project to achieve these targets. Nevertheless, progress of the project and outcome and output level suggest that the foundations for achieving this impact is in place.

### **Outcome 1: Livestock farmers/producers benefit from reliable market access and diversified opportunities in the milk and meat local and export markets.**

<u>Indicator 1.1:</u> Number of rural producers (persons, men/women) generating tangible positive income changes due to reliable market access and diversified opportunities in the milk and meat local and export market	No impact collated to date
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#### **Output 1.1: Expanded more efficient milk collection and meat/cattle buying infrastructure available**

<u>Indicator 1.2:</u> Improved milk collection or meat/cattle buying infrastructure or operations	
<u>Target 1:</u> Number of SMEs milk/cattle/meat Processors / buyers that invested in infrastructure or operations (including optimization of the productive use of materials, energy, water etc., consultancy to farmers)	December 2018 targets met – 5 SMEs invested
<u>Target 2:</u> Number of improved or established infrastructure or operations	December 2018 targets met – 5 investment plans developed and being implemented (by June 2019) impacting on 14 communities.

<b>Target 3:</b> Number of rural settlements that have improved access to milk/cattle markets in the result of project interventions	December 2018 targets met – As a result of the 5 investment plans 14 rural settlements will improve access to the milk market
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Project activities to improve milk collection appears to be on target with work progressed in developing investment plans with processors in particular.

#### Output 1.2: Dairy and meat business operators developed and implemented export plans

<b>Indicator 1.2:</b> Number of SMEs (dairy processing companies/cattle/meat traders) developed and implemented export plans	In 2019 one Processing SMEs started exports to Georgia. Export plans included in 5 investment plans. (target for Dec 2018 – 1 SME) On target
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Work to developing export plans are on target with plans established to undertake a marketing field visit to Georgia in 2019.

#### Output 1.3: Established consolidation services for smallholder farmers

<b>Indicator 1.4:</b> Number of 'lead' farmers established and providing consolidation services	2 lead farms will be ready and will start operations by June 2019 (target for December 2018 – 2 lead farmers providing services) On target (although behind schedule)
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The work with lead farmers is about to reach the target for December 2018 (2 lead farmers) and is therefore delayed. The target of having lead farmers established and having invested and set up operations and then actually offering services to farmers within 12 months of the project set-up appears optimistic. This also highlights that to reach the target of working with 10 lead farmers, the project needs to start all these collaborations now to ensure this target is met by the end of the project.

Having a single indicator for this output appears inappropriate when the main rationale for supporting lead farmers is to benefit other smaller farmers with a consolidation service. There is danger that the primary benefit of this intervention is captured by the lead farmers and does not accrue to smaller farmers. It is recommended that other indicators are included that quantify the benefit to smaller farmers.

### **Outcome 2: Livestock farmers benefit from improved access to inputs and business development services and enhanced regional linkages**

<b>Indicator 2.1</b> Number of rural producers generating tangible positive income changes due to improved access to inputs and business development services and enhanced regional linkages	Target for December 2018 was at least 1000 persons (50% female)  No data provided to date
<b>Indicator 2.2</b> Increased trade turnover (on farm inputs) between Georgia and Armenia as a result of new market linkages established	No impact collated to date (is this a realistic indicator for the project?)

No data has been collected for indicator 2.1. Indicator 2.2 appears to be a difficult for the project to assess (presumably based on GoA trade statistics) and it is questionable whether this is an

appropriate indicator at Outcome level for the project (this is more a goal or purpose level target for a trade project – not a project working primarily at SME level). It is recommended that the indicators for this Outcome be reformulated in a way that they are measurable, and a measurement process be put in place to ensure that the indicators can be appraised on the date that targets are set.

#### Output 2.1: Private veterinary points established and operated in the project area

<u>Indicator 2.3:</u> Number of private veterinary service points established and operating in project area	<p>December 2018 target on 10 vet points established (serving 23 rural settlements) achieved</p> <p>As of June 2019, 3 additional new vet points established and started operations. Another 22 vet points are in process and will be ready and operational by the end of 2019.</p> <p>On target.</p>
<u>Indicator 2.4</u> Newly established private veterinary points ensure quality of provided services	<p>December 2018 target of 10 vet points established providing services achieved and appears on target.</p> <p>On target (but reporting on quality appears unclear)</p>

Work on establishing veterinary points appears to be well progressed and on target. Indicator 2.4 focuses on quality of the vet service but is currently being reported on vet services established (a repeat of reporting of indicator 2.3) – i.e. the fact that the service point has been established and is equipped suggests it provides a quality service. This indicator on quality is useful but needs to have a measurement system that effectively appraises quality of the services and provides a feedback mechanism to the project to identify which services may require additional support to increase quality. Recommendation that a method of measuring quality of vet services be established and that the project measures and reports on this.

#### Output 2.2 Market linkages established between wholesalers (including from Georgia) and retailers of farm inputs

<u>Indicator 2.5:</u> Number of issue specific cross border initiatives	<p>Target in December 2018 – 0 Target in Dec 2020 – 3</p> <p>Project started collaboration with ALCP project to identify areas for cross border initiatives. Preliminary agreements made for establishment market linkages between Armenian dairy producers and Georgian wholesalers/retailers. Joint capacity improvement activities for veterinarians and development of cattle surveillance points were initiated.</p> <p>On target</p>
<u>Indicator 2.6:</u> New market linkages established between wholesalers (including from Georgia) and retailers of agro-inputs in project area	<p>Target in December 2018 – 0 Target in Dec 2020 – 4 new market initiatives</p> <p>In May 2019 with the support of the Project one agro-inputs' shop established and started its operation.</p> <p>Appears on target</p>

Work on establishing market linkages between wholesalers and retailer (including Georgia) appear to be on target.

#### Output 2.3: Improved quality of cattle through Animal Replacement

<u>Indicator 2.7:</u> the quality of cattle farms improved through animal replacement	<p>Target in December 2018 – 0 Target in Dec 2020 – 600 cattle</p> <p>By May 2019 201 heads of cattle were purchased by 52 farmers (of which 13 women). – 33.5% complete</p> <p>Appears to be on target</p>
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Work on animal replacement appears on target achieving 33.5% of the end of project target with mechanisms in place to continue and increase the number of animal replacements.

#### **Outcome 3: Livestock farmers/producers benefit from sustainable natural resource management**

<u>Indicator 3.1</u> Number of rural producers generating tangible positive income changes due to sustainable natural resource management	<p>December 2018 target achieved and exceeded (2000 people for a target of 1,500 people)</p> <p>On target</p>
<u>Indicator 3.2</u> Quantity of lands used under improved land management practices	<p>December 2018 Target achieved and exceeded (31,160 Ha achieved on a target of 15,000 Ha)</p> <p>On target</p>

Work on improving natural resource management is progressing well and targets are being met and exceeded.

#### Output 3.1: Local actors/ representatives of target groups improved knowledge and skills to design, operate and improve land management strategies and plans.

<u>Indicator 3.3:</u> Number of target groups' representatives (pasture users/farmers, community council and staff of local authorities) with improved knowledge and skills to design, operate and improve land management strategies and plans.	<p>December 2018 target reached and exceeded (116 for the target of 100 people). But number of women only partially achieved (only 15% were women for a target of 30%)</p> <p>On target for number but not on gender balance</p>
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The work to improve the knowledge and skills of local actors/representatives appears on track for the total number of people, but the project is not achieving the gender target of having 30% of those trained being women. Plans need to be enacted to improve the gender balance, or if there are compelling reasons to alter this target these need to be considered and the target revised.

#### Output 3.2: Environmentally friendly practices or improved procedures for land management are being implemented.

<u>Indicator 3.4:</u> Number and type of introduced environmentally friendly practices or improved procedures for natural resources management.	<p>Target of 1 practice/improved procedure by December 2018 achieved with 1 rural pasture</p>
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	management plan implemented in 10 communities On target
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This output is being reported as the development and implementation of a pasture management plan with one environmental /land management practice change already been implemented. Progress therefore appears on target (although an end of project target of two practices being implemented appears modest).

### Output 3.3 Improved infrastructures in pastures

<u>Indicator 3.5: Number and type of improved infrastructure in pastures</u>	No targets were set for December 2018 with a target of 170 improvements for 2020 Some delay was noted by the project due to complicated procurement procedures proscribed by the state.  On target but with some delays encountered
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Improved infrastructure in pastures generally appears on target although there have been some delays due to government tendering procedures.

### **Note on weakness of the targets/indicators in the Northern project's logframe**

A general criticism of the log frame and reporting system is that the targets set and reporting to-date provides no ability to assess the emerging or potential scale of impact on smaller farmers. To-date all impact reported is at Output level and relates to what is being achieved directly with lead farmers, processors, service providers, local authorities etc. Indicators of benefits to the end beneficiaries (smaller farms and households) is currently not reported on a. For example, the rationale for working with lead farmers (Output 1.3) is not to benefit the lead farmer alone, but to create a milk consolidation service that benefits other farmers in the community – presumably through higher sales of milk and higher prices. The only indicator specified for this output is the number of lead farmers establishing consolidation services – indicator 1.4. There are no indicators to report on the scale of benefit for smaller farmers from this service (only an outcome level indicator on number of farmers benefitting from all the activities of Outcome 1). It is therefore theoretically possible to achieve the impact target of 10 lead farmers while providing very little benefit to smaller farmers. The design of the log frame and indicators could therefore reduce the ability of the project to assess impact at smaller farm levels.

It is suggested that additional measurable targets be considered at output level as follows:

- Output 1.3 Consolidation services through lead farmers: Only indicator/target is number of lead farmers establishing consolidation services. Add target/targets that show the level of benefit on smaller farmers.
- Output 2.1 : Veterinary service points: Only indicators/targets are on number of vet service points. Add a target for usage of vet services among farmers (e.g percentage using the service or number of transactions)
- Output 2.2 : Market linkages between wholesalers and retailers of farm inputs: Only indicator/targets is number of initiatives. Add an indicator on number of transactions with farmers or possibly increase in sales.

### 3.4.3 Impact of the projects on rural migration

The terms of reference for the review included questions on whether the livestock projects are impacting on rural migration. This topic was discussed with a number of rural community leaders and with a representative of the Organisation for International Migration (IOM) in Armenia. Armenia has a relatively high rural to urban migration as well as a net-migration from the country. For example, between 2016 to 2017 net migration from Armenia was a negative 51,000 individuals (137,000 individuals leaving and 86,000 returning). In the same time period 32,700 individuals migrated internally within Armenia<sup>10</sup>.

No collated national statistics were identified during the review on the detailed migration flows or trends since the 2011 national census<sup>11</sup>, but data does exist at the village and enlarged community level. Discussions with stakeholders suggest the following trends within the project area:

- Rural to urban migration of families: This was a problem in the past (in the years after independence) but local officials stated in all the villages where this was discussed<sup>12</sup> that the population is generally stable and few families were leaving – particularly in the larger villages.
- Rural to urban migration of young people: This does appear to be an issue for many rural communities but there was no data available to the review on average age in rural villages. The age demographic trend of rural villages would be a useful indicator of youth migration. Villages noted that education was a driver of youth migration with young people often not returning after studying in larger towns and cities.
- Seasonal labour migration: This was perceived as a major factor in many of the rural villages – particularly in Northern Armenia, but also in Vayots Dzor. The major seasonal migration is among men travelling to undertake relatively menial and low paid jobs in Russia. Community leaders noted that this had reduced recently with the devaluation of the Russian Rouble.

Project impact on migration: The projects are not collecting information on migration and there is no quantitative or analytical data to conclusively link the project activities to a reduction in migration. Nevertheless, interviewees during the review stated that they strongly believed that the work to improve profitability of livestock has led to a reduction in seasonal migration and is contributing to encouraging the return of young people to rural communities. An interview with a seasonally female headed household (a poorer family with only 4 cows) in Tashir town (Lori Marz) highlighted that the family was aiming to increase cattle numbers so that the husband could stop seeking employment in Russia and focus on increasing cattle numbers and productivity. The family stated that the support that the project had provided had increased the potential for this to happen while also explaining that the reduced wages in Russia was also a factor in this decision.

### 3.5 Sustainability of the interventions

The question of the sustainability of the project interventions is addressed jointly across both projects since the projects have very similar approaches to both intervention and sustainability. Sustainability is considered at three levels:

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<sup>10</sup> Migration Snapshot republic of Armenia, OIM 2017

<sup>11</sup> It was reported that a national census is scheduled for 2020/21

<sup>12</sup> Villages of Jambarak in Gegharkunik, Head of Dept. of Agriculture Lori Marz, Tashir in Lori Marz, Amasia Enlarged Community in Shirak all stated that population was stable. Yelvin Village in Vayots Dzor stated that population has increased but seasonal migration was high.

- 1) Benefits and services sustained: Will the services that have been improved and the companies, institutions and structures that the project has supported to emerge sustain after the intervention has ceased?
- 2) Structures and services adapt, grow and diversify: Are the incentives and skills adequate to allow the services and inputs that have been supported by the project to adapt, grow and diversify according to changing market situations and opportunity?
- 3) Services and other changes replicating and being copied: Have the conditions been created so that services and other benefits are being copied and replicated within the market?

An M4P approach not only focuses on project impacts being sustained, but on those benefits growing and diversifying and other actors replicating the changes (new services etc.). The strength of sustainability of the project at these three levels are appraised separately (table 4).

**Table 4: Appraisal of the sustainability of project interventions**

Project focus	Appraisal of sustainability		
	Sustained	Diversify/grow	Replicate
<b>Milk Market</b>			
- Milk collection points	Strong	Medium	Low
- Milk Processing companies expanding production	Strong	Medium	Medium
- Lead farmer model for milk collection	Strong	Medium/low	Low
<b>Meat Market</b>			
- Meat buyers	Strong	Medium/low	Low
- Animal market	Uncertain	Uncertain	Very low
<b>Animal replacement</b>			
- Animal replacement service	Very low	Very low	Very low
<b>Farm support services</b>			
- Veterinary service points	Strong <sup>13</sup>	Medium	Low
- Artificial Insemination services	Strong	Low	Low
<b>Access to finance</b>			
- For farmers (value chain financing)	Medium/Low	Low	Low
- For processors (expanding production)	Medium	Medium	Low
<b>Farm inputs</b>			
- Farm input service provider (expansion)	Strong	Medium	Low
<b>Farmers capacity and training</b>			
- Farmer training and capacity building	Strong/medium	Medium	low
<b>Working on local governance</b>			
- Pasture management	Strong	Medium	Medium
- Data management	Strong	Medium	low

Overall the projects' interventions are relatively strong on their potential for them being sustained after project support ceases. They are less strong in the potential for these services and benefits to diversify and grow after the project ceases. The potential for replication by other non-direct beneficiaries of the project is relatively weak at present since this has not been an explicit focus of either project, and the Southern Project is too short to expect replication.

<sup>13</sup> Although some concern about entrants of young people into veterinary services

The rationale for this subjective appraisal is provided below:

### **Milk market intervention sustainability**

Milk Collection Points: MCPs have been well established by the project and operate on commercial commissions on milk collected. Their potential to continue after the project is good. There are also signs that some MCPs are diversifying to provide other services (e.g. fodder milling in Harzis MCP) and expanding to new communities. This is not a strongly competitive market and there are no mechanisms in place to promote replication and growth of MCPs in other communities building from the experience of successful MCPs established

Milk Processing Companies expanding production: The processors have a strong commercial incentive and are very likely to continue their expanded activities after the project ceases. One potential sustainability challenge is the volatile whole milk market with the introduction of milk powder and vegetable oils to the lower end cheese processing sector. Diversification and growth into new varieties is relatively strong but could be strengthened by a stronger advisory/training capacity being developed within the market (rather than delivered by the projects themselves). The potential for the technologies and new products being picked up by competitors is reasonably strong but could potentially also be strengthened by a stronger private training/consulting capacity being developed.

Lead farmer model for milk collection: This is in very early stages in the Northern project and has not been implemented in the Southern project. The commercial incentives appear relatively strong for lead farmers to sustain initial levels of milk collection, but there is some danger that the lead farmers perceive milk collection from smaller farmers or a larger number of communities as a minor focus as they expand their own cattle since milk collection margins are relatively low. Diversification and growth of services to other farmers may therefore be limited. Potential replication after the project ceases is low since there are no plans to promote this as a model for other farmers or service providers who would promote the model more widely.

### **Meat market intervention sustainability**

Meat Buyers: Activities with meat buyers are relatively limited in both projects (particularly the North where dairy is strong). It is likely that the meat buying stimulated by the project will sustain. There are also signs that farmers have recognised the benefits of increased productivity (meat yields) or genetically improved cattle and have increased focus on fattening calves for the meat market. Expansion is therefore likely as farmers sustain a focus on fattening calves. Nevertheless, this is limited by lack of access to information on where to purchase high yielding calves for fattening. Replication potential in meat buying (and selling) would be stronger if there was a more vibrant market for the sale of calves for fattening.

Animal market: The physical animal market that has been established in the Goris area of Syunik has been established by SDA with 100% funding support. The ownership future of the market is currently uncertain and is up for discussion (the options and recommendations for this ownership is summarised in annex 3). At present the sustainability and future ownership of the market is uncertain with restructuring of ownership and revenue models required. It's potential for growth and diversification is also uncertain and the model has very low potential to be replicated by others when it is yet to prove a viable model.

## **Animal Replacement**

Animal replacement service: This has been set up as a short term stimulus to the breed quality of cattle in the project area. Nevertheless, the animal replacement programme has clearly stimulated a demand for the purchase of improved cattle both in the South and more recently in the North. This stimulated demand suggests that there is potential to stimulate more sustainable services in the sale of genetically improved cattle (such as information and brokers) that could result in stronger diversification and growth and potentially replication.

## **Farm support services**

Veterinary service points: The veterinary service points have been effectively established with commercial incentives and are very likely to be sustained after the projects cease. There is also evidence that the stronger vet points are diversifying their services although some of the points in smaller communities are likely to stay small and operate very much as part-time enterprises. The project has only undertaken limited inputs to promote diversification, partly because diversification includes working with other animal sectors and outside the project focus. One challenge to longer term sustainability is the lack of young people entering veterinarian practice from rural communities and an unwillingness of young vets to work in small villages. Activities to promote vet services as a career opportunity and encouraging young people from smaller rural villages to enter veterinary training would enhance both longer term sustainability of the existing services and replication of the service.

Artificial insemination services: Many AI services are being provided by vets and, similarly to vets, the services are likely to be sustained. Diversification is being stifled by the monopoly of the AI input wholesale market (which is being dominated by CARD AI services). Replication of the service to other potential service providers (other than direct project beneficiaries) has not been a focus of the projects.

## **Access to Finance**

Access to finance for farmers: The focus has been on value chain financing in the Southern project with just two schemes having been established. One scheme with Elola CJSC relies on access to improved cattle at the Syunik cattle market so is reliant on the future role of the cattle market. The second scheme involves a credit scheme with an agro-input provider which has a greater potential to be sustained. Growth or replication of these services has not been a sustained focus of the project.

Access to finance for processors: The project has assisted processors to develop investment plans and gain access to financing. The benefits of this is likely to be sustained and there is also potential for these processors to build on this investment to diversify further. Nevertheless, the investor support has not been developed as a supporting service that can be provided after the project ceases or on demand from the processors outside the project. Replication would be enhanced by more focus on developing investor support and brokerage services.

## **Farm inputs**

Farm input service providers: farm inputs have been developed with the commercial service provider sector and has a relatively strong potential to be sustained and diversify. Replication has not been a focus for the project.

Farmer capacity and training: The Southern project has undertaken a variety of direct training and promoting embedded and value chain services. The embedded and value chain services have a strong potential to be sustained and a reasonable potential to diversity. The direct training is a project function and will not be sustained after the project ceases. No replication strategy has been envisaged or enacted.

### **Working on local Governance**

Pasture management: Pasture management appears very well received by local government and there appears a strong potential for this to be sustained at local government level and for the practices to be built upon. A collaboration with GIZ's integrated Biodiversity Management Program to develop manuals on pasture management planning and rehabilitation of overgrazed and degraded pastures as well as collaboration on a national coordination platform on pasture management provides a good opportunity to promote replication for this activity. Nevertheless, to promote wider replication strongly it would be beneficial to develop consultancy / training / advisory service provision as a privately provided service rather than the service capacity remaining inside the project.

Data management: Similar to pasture management, it appears that the data management systems are well received by local government and are likely to be sustained and built upon. Capacity has not been built outside the project to offer private training and consultancy in local government data management.

### **Overall appraisal of sustainability with the livestock projects**

The projects overall have been strong on stimulating services in the private sector or with local government and this has increased the potential for services to be sustained after the project ceases. Most intervention areas have a strong focus on sustainability of the actual service with the animal market, animal replacement service (stimulating a market for the buying and sale of improved cattle) being the weakest areas. The project has laid the foundations for some diversification and growth of these services, but more organic growth and diversification of the services has not been designed into the project or indicators. The project design and focus has been less strong on working towards promoting wider replication. Strengthening some aspects of sustainability, stimulating greater diversification among service providers and rolling out a replication strategy for services are opportunities for building on the achievements of the project.

## **3.6 Collaboration and key stakeholders of the project**

### **3.6.1 Collaboration with local government**

Table 5 provides a list of collaborations with various levels of government. The projects have been effective at building relations with various levels of government.

**Table 5: project collaboration with various levels of government**

Level of Government	Main roles and collaboration
Rural Community level	<p><u>Roles:</u></p> <ul style="list-style-type: none"> <li>• Contact point for the project and mobilization of beneficiaries.</li> <li>• Information dissemination to farmers/communities</li> <li>• Collaboration on establishing vet services, pasture improvement, fodder production in particular</li> </ul> <p><u>Reporting and contact</u></p> <ul style="list-style-type: none"> <li>• Regular meetings</li> <li>• Annual reports and information on project results</li> </ul>

Enlarged community level (newly established)	<p>Similar to above but with a new enhanced role:</p> <ul style="list-style-type: none"> <li>• Input to strategic discussions</li> <li>• Pasture management (centralised)</li> <li>• Exchange visits with other municipal authorities</li> <li>• Co-funding arrangements with formal contracting.</li> </ul>
Marz level institutions	<p><u>Regional Centres for food safety. collaboration/info sharing on:</u></p> <ul style="list-style-type: none"> <li>• Disease control</li> <li>• Plant control</li> <li>• Vet services</li> <li>• Food safety</li> </ul> <p><u>Small and medium enterprise development centre. Collaboration on:</u></p> <ul style="list-style-type: none"> <li>• Training and consulting with SMEs</li> <li>• Linking project partners to their services</li> </ul> <p><u>Extension services. Collaboration on:</u></p> <ul style="list-style-type: none"> <li>• Training and extension (although this reduced recently as the extension services are being restructured)</li> <li>•</li> </ul>
Marzpet	<p><u>Linkages specifically to:</u></p> <ul style="list-style-type: none"> <li>- <u>Marzpet team</u></li> <li>- <u>Department of Agricultural Development</u></li> <li>- <u>Department of territorial Development</u></li> <li>• Project information sharing</li> <li>• Membership of project steering committee (annual)</li> <li>• Participation in solving challenges related to cross-cutting and regional issues</li> <li>• Meetings 6 times a year</li> </ul>
National level	<p><u>Ministry of Agriculture- Deputies and heads of departments</u></p> <ul style="list-style-type: none"> <li>• Participation in the project steering committee (annual)</li> <li>• SDA participates as advisers in government programmes related to livestock</li> </ul> <p><u>Ministry of territorial Administration and Infrastructures- Deputy and department heads</u></p> <ul style="list-style-type: none"> <li>• Participation in the project steering committee (annual)</li> <li>• Meetings with the project.</li> </ul>

### 3.6.2 Collaboration with donor projects

Table 6 provides details of some of the main collaborations that SDA and the projects have with donor funded projects. SDA has been effective in both collaborating with and adding value to a number of donor projects.

**Table 6 Collaboration with donor related projects and donor supported institutions**

Donor/project	Details of the collaboration
ENPARD- The European Neighborhood Programme for Agriculture and Rural Development (UNDP implemented)	<p>Developing a framework for the milk market and high value cheese production.</p> <p>In Yelpin village co-operative</p> <ul style="list-style-type: none"> <li>• Collaboration on technical assistance</li> <li>• Grant funding to co-operatives</li> </ul>
USAID ARDI (Advanced Rural Development Initiative) Project	<p>Working on the milk value chain</p> <ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Grant Funding</li> <li>• Equipment</li> </ul> <p>Provided to 3 co-operatives in Vayots Dzor and 1 in Kapan (Syunik). 4 involved in milk collection and 1 in processing.</p>

UN Global Environment facility (GEF)	<p>Small Grants Program</p> <p>Small grants for environment related projects – linked to:</p> <ul style="list-style-type: none"> <li>• Pasture development</li> <li>• Solar energy in pastures</li> </ul> <p>2 projects collaborated on – 1 in the North and 1 in the South.</p>
GIZ Integrated biodiversity Management Programme	<p>National level linkages around pasture management</p> <ul style="list-style-type: none"> <li>• Manuals developed on pasture management planning and rehabilitation of overgrazed and degraded pastures</li> <li>• Pilots on pasture management co-financed by GIZ to test the contents of manuals.</li> <li>• National Co-ordination platform focusing on the strategic aspects of pasture management – World Bank CARMAC (Community Agricultural Resource Management and Competitiveness) project also joined this forum which has met 4 times.</li> </ul>
CARD Armenia	<ul style="list-style-type: none"> <li>• Joint support to establish a national Veterinary Association which was established in August 2018</li> <li>• Setting up an accreditation system for veterinarians</li> <li>• Card Smart Agro providing inputs for AI (CARD operates an effective monopoly in Armenia)</li> </ul>
Credit and financing facilities	<ul style="list-style-type: none"> <li>• ACBA Bank loans and ACBA Leasing</li> <li>• Armenian Government supported loan facilities for agriculture and latterly (in 2019) processing.</li> <li>• Armenian Government leasing support programme</li> <li>• SMEDNC (Small and Medium Enterprise Development National Centre) subsidised loans for SMEs</li> </ul> <p>(Note: Government of Armenia programmes are provide through various national banks)</p>

## 3.7 Mainstreaming transversal themes in the project

### 3.7.1 Gender

Gender has been mainstreamed into both projects through:

- Ensuring effective disaggregation of data by gender
- Setting gender targets in the project log frame
- Undertaking gender focused surveys and baselines
- Undertaking women-only training and consultations
- Undertaking women only FGDs to explore women's perspectives on project activities
- Focusing some activities specifically on women farmers or providing increased incentives to participate in project activities.

Gender oriented activities focus specifically on two groups, vulnerable female-headed households (where no adult male is in the household) and young female farmers:

Vulnerable Female-headed households: Softer loans are being provided with a 50% discount for cattle buying and the animal replacement programme. The project is also identifying female headed households that are not involved in the cattle sector (they have no cattle or no milk cows) and provide subsidised support to purchase cattle. The project is also making additional effort to link these households to agricultural services (veterinarian and AI), inputs (fodder) and milk markets.

Young female farmers: The young farmers project under the Southern Project started 2 year ago and responds to the opportunity of working with younger farmers who are more adaptive to new technology. This project has actively sought to engage with young female farmers. The project has

established a small grant fund (200,000 AMD around US\$400 grants) and promoted work on upgrading cattle sheds. Of the 40 grants disbursed 20 have been to women. Female farmers have also been supported and motivated<sup>14</sup> to purchase milking machines on credit. The project recognises that milking is primarily a role that women take in traditional Armenian farming households and that this role is time consuming and can add extra burdens for women particularly as cattle numbers and productivity increases.

Overall the focus on women and gender appears to have been effective in the project. There have been some challenges to separating roles and focussing on women specifically since most farms are family enterprises operating within a relatively traditional and conservative social and cultural context. The focus on vulnerable women is particularly beneficial and the review encourages this to be strongly replicated in the North (which already appears to be happening).

The access to milk markets focus of the projects is perceived by stakeholders to be having a positive impact on women in farming households. Access to a milk market and the resulting a sale of milk reduces the burden on women to process surplus milk to cheese, which is a highly time-consuming task that needs to be done on an almost daily basis. Selling milk therefore frees women who reported that they use this time to focus on both income activities (such as small horticulture) and family activities.

It is recommended that the project takes advantage of opportunities to challenge gender roles and stereotypes among stakeholders, but also among project staff. For example, the Gender analysis<sup>15</sup> undertaken as a preliminary study for the Northern project quoted representatives of Local Self Governing Bodies saying that ‘they were convinced that the job of the vet service providers did not fit females’ and the report goes on to state that ‘at first sight it sounded like a stereotype, but the explanation was justified; ...the vet service demands strong physical skills and many times cause discomfort in terms of night-time urgent calls from livestock processing farmers’. This section of the baseline gender analyses highlights not only an engrained gender stereotype among important stakeholders, but also that the project staff writing this report has endorsed the stereotype. During the review it was reported that there are 3 women vets working in Shirak Marz which highlights the weakness of this stereotype. The project should not reinforce or endorse gender stereotypes but seek to challenge them and use the examples of women in strong and unconventional roles as role models.

### **3.7.2 Governance**

As illustrated in section 3.6.1 and specified in table 6, the projects have a strong collaboration with various levels of local, Marz and national government. The project aims to promote the values of good governance and specifically transparency, accountability, efficiency and effectiveness. The work at local and Marz level specifically focuses on consultation, participation and working towards community cohesion and consensus building. The projects’ relationships with local and enlarged community governance structures appears particularly strong.

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<sup>14</sup> Women are provided a ‘gift’ when they purchase a milking machine – which has mostly been a small hand cart for transporting milk which is also beneficial to reduce physical burdens for women in farm households.

<sup>15</sup> Gender Analysis on Livestock Development in Armenia: South-North project, SDA , 2018

### **3.7.3 Disaster Risk Reduction - DRR**

The projects' focus on DRR has been less than that of other transversal themes such as gender and governance. The focus has been more on mitigating environmental factors which are primarily related to:

- 1) Issues around pasture management e.g.
  - Reducing overgrazing which can lead to land degradation and even potential land slip.
  - ensuring upgrading and opening new pastures does not contribute to deforestation
- 2) Focus on low-carbon technologies and approaches
  - Fodder production
  - Environmentally appropriate farming approaches.

## **4 Conclusions and recommendations**

Overall, both projects are performing well. The southern project, as a mature project entering its final stage and is on target to meet its targets and have a positive impact on rural incomes. The Northern project is at much earlier stage of implementation but has laid the foundations for leveraging impact at household level. This section provides a summary of the main conclusions and recommendations from the review.

### **5.1 Main conclusions of the review - Southern Project**

- An overall very well managed and implemented project
- Achieving and surpassing most of the log frame targets.
- The project has developed very strong relationships at local level and a strong reputation for effectiveness and efficiency among stakeholders.
- Particular strengths of the project have been in the development of vet service points, AI services pasture management in local governments and working with the formal dairy processing industry to grow demand for milk and expand milk collection from greater numbers of farmers and communities.
- The project design and implementation has been stronger in dairy than it has been in the meat market.
- The project could also have benefitted from a broader focus on developing the meat market rather than focusing primarily around a physical animal market as a way of developing the meat market.
- The Syunik animal market is one of the weaker elements of the project, and while it has been a useful asset during the life of the project, its future is uncertain and the services around it have not been proven to be commercially viable which has been at least partly due to the uncertain legal status of the market.
- The project has been successful in stimulating supporting services such as vet, AI and inputs and these services have a strong potential for sustainability. The project design did not focus on replication and additional focus on replication could have been beneficial to deepening sustainability.
- Strengthening of activities around stimulating diversification and growth of services established during the project and replication of these services more widely is an area of potential additional focus in a new phase.

## 5.2 Main conclusions of the review - Northern Project

- A well managed and implemented project that has started rapidly despite challenges in the political environment.
- The project has very effectively leveraged from experience in the Southern Project – which has also supported its ability to take off rapidly.
- The project's focus on building export market linkages for quality cheese and dairy and developing niche market high quality cheese is important for strengthening a sustained demand for whole milk which is essential to continued growth in the cattle sector.
- Some log frame targets at Output level are poorly formulated – greater emphasis on impact rather than activities as targets would strengthen the logframe and reporting.
- The design of the project, which does not work at farm level and focuses on working with formal market actors (processors and lead farmers), and lack on disaggregated data on smaller farmers/poorer households could result in the project becoming 'poverty blind'. Additional focus and analysis to ensure the project impacts effectively on smaller/poorer and marginalised groups is recommended
- The project duration of 3 years is very short for an M4P type project and there are some concerns that it will be difficult to achieve the goal level impact within this time period. Extending the project duration is recommended.

## 4.3 Key Recommendations of the review for future interventions

Increased focus on replication for future activities (future rural income projects): The impact and sustainability of the projects could be enhanced with an increased focus on activities that promote replication. This can be in the form of increased promotion of the models (for example of vet service businesses, models for pasture management) and the services that can promote wider replication (training and consulting services for processors, training and advisory for local authorities on pasture management).

Developing supporting services within the market (future rural income projects): Some of the support that has been provided from within the project to formal actors in the market (lead farmers, processors and even local authorities) appears to have a strong potential to become a viable service in the longer term. Pushing such services into the market so that market actors can use these outside project support would enhance both sustainability and replication.

Increased focus on the meat market (Future projects and extensions of projects in livestock): The meat market component of both projects was substantially weaker than the dairy market component. The explicit inclusion of the meat market in the project design is strongly endorsed, but should be strengthened in future livestock projects.

Short project duration (Northern Project): The 3 year timeframe for the Northern project is too short for a MSD/M4P type project and is possibly one of the reasons for weaker log frame targets for the project. The initial short timeframe has inevitably focused the project on short term goals rather than longer term systemic change. Longer timeframes for MSD oriented projects are recommended.

Disaggregated data for smaller farms and poorer households (both projects and future rural income projects): As projects that have a rationale for increasing both rural development and incomes among poorer rural households, it would be beneficial to ensure that impact reporting disaggregates benefits for smaller farms and poorer households wherever possible.

Smaller farm/poorer household focus (in the Northern project): Closer monitoring of the benefits reaching smaller farmers and more marginalised groups is recommended to ensure the project does

not become 'poverty blind'. The lead farmer model is one area where there is specific concern that the benefit is captured predominantly by the lead farm and other large farms.

Additional impact targets (for the Northern Project): It is recommended that some additional targets be added that are more meaningful on impact (rather than just reporting activities undertaken) in Output 1.3 (lead farmers), Output 2.1 (veterinary points) and Output 2.2 (linkages between wholesalers and retailers)

Project extension of the Northern Project: The very short 3 year timeframe of this project is a concern and the consideration of a project extension is recommended to ensure that the project can effectively leverage impact.

Additional phase of the Southern project: If there was a new phase considered for the Southern project, it is recommended that this not merely focus on geographic widening of activities but that it focuses on:

- 1) Strengthening the work in the meat market (outside the physical animal market – see page 14 of this report)
- 2) Building diversification, growth and replication of the activities and services developed under the project.
- 3) Work to strengthen the whole-milk dairy and cheese market with branding and consumer awareness (see page 13 of this report).
- 4) Building on the work to increase export markets for high quality cheese and new varieties of cheese to strengthen the demand for whole -milk (and counter downward price pressures on farm-gate milk prices).

## Annex 1: Impact matrix: Livestock development in the South of Armenia

Log Frame target	Impact targets	Impact to 28 <sup>th</sup> February 2019	Notes on impact
<b>OVERALL GOAL: Increased economic opportunities and incomes of male and female farmers involved in animal husbandry in Syunik and Vayots Dzor Marzes</b>			
<u>Indicator:</u> Increased net additional income for male and female farmers from animal husbandry	<p>In 100 rural communities of Syunik and Vayots Dzormarzes</p> <p><u>Mid-term</u> – incomes of at least 5,000 households/smallholder farms in target communities increased by 21% compared with base-line;</p> <p><u>End of Project</u> - incomes of at least 50% of 14,000 households/smallholder farms in target communities increased by 30% compared with base-line).</p> <p>Baseline: Annual average net income per farm/household is 393,916 AMD.</p>	<p>- 100 communities covered by the project</p> <p><b>Data for 2017</b>  Net income of almost 5,900 livestock farms/households (in total 15,100 farmers of which 42% female) of Syunik and Vayots Dzor marzes has increased by 62% between 2014 and 2017. In 2017, about USD 3.621 mln net additional cash income (annual data) has been generated in the meat and dairy sectors in the target area (i.e. about USD 665 per household, in addition to self-consumption and bartered products).</p>	<p>Mid term targets achieved and exceeded.</p> <p>At mid term- 42% achieved against final project target in terms of number of farms.</p> <p>% increase in income substantially exceeded at mid term (62% increase against a 30% target)</p>
<u>Indicator:</u> Number of male and female farmers/smallholders with improved access to farm support services & markets	<p><u>Mid-term</u> - 70 communities; 9,800 households/farms</p> <p><u>End of Project</u> - 100 communities; 14,000 households/farms.</p>	<p><b>Data at 1<sup>st</sup> January 2019</b>  -100 rural settlements  - 14,300 households/farms (35,650 farmers, 42% females)</p>	<p>Target achieved and exceeded for number of beneficiaries (but more detailed data is required to properly assess achievements against this target- at present it is being reported merely as number of communities worked in and number of households in these communities)</p>
Indicator: Productivity of animals increased in 7,000 smallholder farms	<p><u>Mid-term</u> - productivity of dairy cows and meat animals increased by 10% as compared to the baseline</p> <p><u>End of Project</u> - productivity of dairy cows and meat animals increased by 20% as compared to the baseline.</p>	<p><b>Data for 2017</b>  Cattle productivity of almost 6,700 livestock households (in total 17,150 farmers of which 42% female) of Syunik and Vayots Dzor marzes has increased by 13% compared with baseline year.</p>	<p>Targets almost achieved by 2017: 96% in terms of number of smallholder farmers and increased productivity of 130% as compared to target</p>

Indicator: Number of organizational changes in local governance institutions promoting participation and efficiency	At least 2 changes: Improved data management processes and pastures management procedures.	<b>Data as of March 2019</b> 2 changes: 1. Improved pastures management procedures 2. Improved data management processes	(Vague and poorly formulated indicator) target achieved
Indicator: Male and female farmers with improved access to local public goods/services (information, communal pasturelands, decision making) facilitated by the Project	<u>End of project</u> : 60,000 male and female farmers (52% are women).	<b>Data as of March 2019</b> In total, 48,500 male and female farmers/inhabitants (52% are women) with improved access to local public goods/services (communal pasturelands, decision making) facilitated by the Project)	81% achieved in terms of outreach
<b>Outcome 1: Improved access of male and female farmers to better functioning milk and meat markets</b>			
<b>Output 1.1 Increased Volume of milk traded through improved raw milk collection infrastructure and efficiency</b>			
Indicator 1: Number of MCPs established	<u>Target</u> : 20 MCPs of which 10 newly established	Feb 2019: 16 MCPs of which 9 are newly established.	80% achieved an on target and another 4 MCPs identified
Indicator 2: Number of milk processing entities increase volume of milk collected from male and female farmers	<u>Target</u> : 70% of milk processing entities	15 milk processing entities increased volume of milk collected (79% of milk processing entities in the project area):  <b>In 2018</b> Volume of milk traded by farmers to milk processors increased by 1.8 times in 2018 as compared to 2014 (accordingly, 10,750 tons and 5,868 tons in 2018 and baseline year)	Target already achieved and exceeded
Indicator 3: Number of male and female farmers making investments in milk production	Target: 60% of smallholders/farmers involved in milk production	4,680 farms made investments in milk production (66% of the farms involved in milk production)  <b>Data as of March 2019</b> Average investment made per farm in milk production: AMD 220,000 per annum	Target already achieved and exceeded
<b>Output 1.2: Increased volume of meat traded through improved animals/meat market infrastructure and efficiency</b>			

<u>Indicator 1</u> : Number of traders/buyers attracted on regular basis.	Target: 50% of meat traders existing in region, 2-3 buyers	4 traders/buyers attracted on a regular basis of which 2 are new  <b>Data as of March 2019</b> 4 traders/buyers attracted on regular basis (2 of which are new), 57% of relatively large meat traders <sup>16</sup> existing in region	Target achieved: Number and proportion of traders exceeded target.
<u>Indicator 2</u> : Number of farmers/smallholders selling/buying through the Animal Market	<u>Target</u> : 800 smallholders/farmers sex-disaggregated data).	725 farmers/smallholders, 23% of which are female sold/bought cattle through the animal market	91% completed and on target for project end.
<u>Indicator 3</u> : Number of transactions and cash equivalent generated	Target: 1400 deals per annum by the end of the Project	Number of trade transactions through the Animal Market comprised 3,110 cumulatively since the Animal market opened at the end of 2015 (average of 890 deals a year with 700 deals in 2018); and the cash value of trade transactions comprised USD 1,700,000.	50% achieved in 2018 - Project believes the ownership uncertainties of the cattle market is reducing sales - It is not certain that this target will be reached
Number of male and female farmers made investment in meat production	Target: 50% of smallholders/farmers involved in meat production.	4,200 farms made investments in meat production (57% of the farms involved in meat production)	Target met and exceeded
<b>Outcome 2: Improved Access of male and female farmers to farm support services and inputs</b>			
<b>Output 2.1: Efficient veterinary services are available for male and female farmers/smallholders</b>			
<u>Indicator 1</u> Number of veterinary points established	<u>Target</u> : 56 veterinary points of which 30 newly established in the project area	49 veterinary points, 22 of which are newly established during the project – at February 2019	88% completed in terms of vet points worked with 73% completed in terms of new vet points established  Project envisages opening 1-2 new vet points but does not foresee the need / demand / opportunity for more vet points. This target will therefore not be met (but this

<sup>16</sup> E.g. butcheries are not considered

			appears to be a pragmatic choice to not chase targets inappropriately)
<u>Indicator 2</u> : Number of farmers used veterinary services	Target: 70% of farmers involved in animal husbandry.  <b>Baseline data</b> : 33% of farmers involved in animal husbandry (3,046 farm/households) in project area used veterinary services in 2014	90% of farmers (8,260 farm/households) involved in animal husbandry used veterinary services in 2018.	Target met and exceeded
<b>Output 2.2 Quality/breed of animals improved through access to artificial insemination services and animal replacement</b>			
<u>Indicator 1</u> : Number of AI points established.	<u>Target</u> : 20 AI services newly established in the project area.	42 AI points, 23 of which are newly established during the current project phase.	Target met and exceeded
<u>Indicator 2</u> : Number of farmers used AI services.	<u>Target</u> : 50% of farmers having cows (sex disaggregated data)	57% of farmers (4,015 farmers) having cows used AI services in 2018. (10% of which female)	Target achieved and exceeded
<u>Indicator 3</u> : Number of cows inseminated	Target: 50% of milking cows	26,425 cows inseminated during the project current phase. 8240 cows were inseminated in 2018 (33% of milking cows in Project area)	Target 66% achieved – but unlikely to be met by project end (Original target appears high).
<u>Indicator 4</u> : Number of cows born as a result of AI	Target: 50% of calves	24,870 calves born as a result of AI during the project current phase. More than 8,000 calves born as a result of AI in 2018 (39% of calves in the project area)	Target 78% achieved– but unlikely to be met by project end (Original target appears high).
<u>Indicator 5</u> : Number of cows with improved quality/breed	Target: 20% by end of project	7,830 cows with improved quality/breed (30% of cows in project area)	Target achieved and exceeded
<b>Output 2.3: Access to finance for male and female farmers/smallholders is improved due to alternative VC financing scheme piloted and implemented</b>			
<u>Indicator 1</u> : Number of VC participants developed and applied advance/credit schemes for finance	<u>Target</u> : 3	2 new VC financing schemes developed by 2 VC participants	67% achieved this may not be fully achieved by the project end

		<ul style="list-style-type: none"> <li>- “Cattle buying credit scheme” developed by the Animal market and Elola CJSC to provide opportunities to milk producers/smallholder farmers to buy high quality milking cows on credit</li> <li>- “Farm equipment buying credit” was developed by Agro-Shop to provide opportunities to farmers to acquire such farm assets as milking machines, mills etc.</li> </ul>	<b>Clarification from the project:</b> One of the issues hindering Animal Market full & effective incorporation into the value chain is its’ legal status. Once settled, new VC schemes can be further developed & applied.
<u>Indicator 2:</u> Number of male and female farmers participated in ‘contract farming’ and other VC financing schemes	<u>Target:</u> 800 farmers	550 farmers (15% of which female)	Target 69% achieved  Project projects that the target is likely to be achieved: the average number of farmers per year is about 160. So it could be assumed that extra 240 farmers will participate in VC financing schemes by the end of the Project.
<b>Output 2.4 : Quality inputs and services for fodder production are available for male and female farmers/smallholders</b>			
<u>Indicator 1:</u> Number of farm support service providers making available quality inputs and services to male and female farmers in target area	<u>Target:</u> 50% of providers existing in the area, 3 new ones	10 farm support service providers providing quality inputs and services, 4 of which are newly established.	Target achieved in terms of numbers of new providers (although the 50% target is not clear)
<u>Indicator 2:</u> Number of farmers used farm support inputs and services	<u>Target:</u> 50% of farmers involved in livestock  <u>Baseline:</u> 11% of farmers involved in livestock (397 farmers)	1,350 farms from 78 rural settlements used farm support inputs and services. 18% of farmers involved in livestock in the project area.	Target 36% achieved and not likely to be met by the end of the project (target of 50% appears optimistic)

Indicator 3: Number and value of trade transactions and services delivered by suppliers in target villages.	Target: Trade turnover increased by 20%	Number of trade transactions and trade turnover in 2018 increased threefold compared to baseline year	Target achieved and surpassed
<b>Outcome 3: Capacities of male and female farmers/smallholders in animal husbandry are improved</b>			
<b>Output 3.1: Service/input providers, local extension service providers and other VC participants provide embedded consultancy/extension to farmers in the target area</b>			
Indicator 1: Number of service/input providers, local extension service providers and other VC participants provided consultancy/extension services in a sustainable way.	Target: increased by 30%  Baseline: 78 service/input providers, local extension service providers and other VC participants provided consultancy/extension services	116 service/input providers and other VC participants provided consultancy/extension services to male and female farmers in a sustainable way (increased by 49% compared with baseline year). - 91 Veterinary & Artificial Insemination service providers - 22 Milk collection points, milk processing companies - 3 Agro inputs trade outlets	Target achieved and exceeded
Indicator 2: Number of male/female farmers/smallholders receiving embedded consultancy/extension services	Target: 60% of farmers/smallholders involved in animal husbandry	96% of farms/households involved in animal husbandry received embedded consultancy /extension services. Over 22,000 Farmers (13% of which female) from 126 rural settlements.	Target achieved and surpassed
<b>Output 3.2 Advanced practices in animal husbandry are adopted by farmers</b>			
Indicator 1: Number of male and female farmers applying new techniques and practices in animal husbandry.	Target: 20% of farmers/smallholders involved in animal husbandry, of which 30% women	2,420 farmers (7% of which women) in 92 rural settlements applying new techniques and practices (33% of farmers / smallholders)	Overall target met and exceeded – but target % for women not reached.
Indicator 2: Number of new technologies/practices adopted by target groups	Target: At least 2 technological practices	3 new technologies/practices adopted by target groups  <b>As of March 2019</b> 1. castration of animals-2,015 farmers 2. fodder production-413 3. application of new farm equipment and feeding-395 farmers <b>In total /excluding repeated farmers: 2,420 farmers</b>	Target achieved and surpassed

<b>Outcome 4 Strengthened capacities of local self-governance bodies to support rural economic development<sup>17</sup></b>			
<b>Output 4.1 Improved capacities of local and regional authorities on data management, processing and reporting</b>			
<b>Indicator 1:</b> Number of communities improved data management through introducing and operating Community Governance Information System (CGIS)	<b>Target:</b> 50 communities in Kapan area and VayotsDzor	CGIS introduced in 20 communities (figure for 28/02/2017)	Revised targets (see footnote 1 from project)
<b>Indicator 2:</b> Number of rural municipalities' staff members trained	No target set in Logframe, number of trainees depended on number of municipality staff required to operate CGIS.	79 staff members trainees (of which 51% female)	Revised targets (see footnote 1 from project)
<b>Output 4.2: Improved capacities of local and regional authorities on pasturelands usage, planning and management</b>			
<b>Indicator 1:</b> Number of communities have developed and introduced Pasture management strategies	<b>Target:</b> 80 rural communities/settlements (of which 50 in project current phase)	11 enlarged municipalities, which include 66 target rural settlements (of which 36 in project current phase) have developed pasture management strategies with project support	Achieved 82.5% on number of communities overall and 72% on new communities. On target

<sup>17</sup> *Adjustments in intervention strategy for outcome 4, 7 Output 4.1:* The Project team has revised the strategy of interventions under “Strengthened capacities of local self-governance bodies to support rural economic development” outcome to address a country-wide community enlargement reform implemented by GoA and donor funded Programs (including “Improvement of the Local Self Governance System” Program funded by SDC ), which contributes to mentioned reform. Improvement of the Local Self Governance System Program targets all newly enlarged municipalities of Armenia, with a particular focus on Syunik and Vayots Dzor regions (SDA Project area). The goal of this program is to contribute to strengthening accountability and efficiency of the local self-governance system in Armenia. The program works at national and local levels and involves the provision of both: technical assistance (TA) and direct capital investments to the municipalities that are already enlarged as a result of the reform, or will be enlarged in the near future. SDC closely cooperates with the existing actors and other initiatives (including those of CoE, USAID, WB) that are joined in their efforts to support a programmatic approach to the Territorial and Administrative Reform (TARA) implementation. GIZ is a lead TA agency in the SDC funded program and supports the Ministry of Territorial Administration and Development (MTAD) in advancing the frame conditions for the reform and provision of TA and limited equipment to municipalities for improving their governance and management as a pre-condition for the reform. GIZ also receives co-financing from USAID for the same purposes, which allows it to increase the coverage of municipalities. *Under this component the introduction of one-stop shops and the Municipal Management Information System (MMIS) in enlarged communities was planned and is being implemented.* The mentioned activity coincides with activities planned under “OUTPUT 4.1: Improved capacities of local and regional authorities on data management, processing and reporting” of LDSA Project. Based on meetings and discussions held between SDA and GIZ Project teams it was agreed that SDA will stop activities towards introduction of *Municipal Management Information System (MMIS)* in communities of Syunik and Vayots Dzor marzes to avoid duplications. In the meantime, the up to date information related to undertaken activities, achievement, results and lessons learnt was transferred to GIZ team to contribute to the planning process. It was also agreed that SDA will support the process of *introduction of one-stop shops and the MMIS in enlarged communities* of Syunik and Vayots Dzor marzes, if required. The Project will continue efforts for collaboration and coordination with GIZ, and other partners to avoid duplications and leveraging efforts in strengthening capacities of local self-governance bodies to support rural economic development in Project area.

			Note: 22 rural settlements are in process of development of pasture management strategies
<u>Indicator 2:</u> Number of communities continued maintaining pasture management system and further developed/expanded those.	Number of rural municipalities with improved pasture management procedures <u>Targets: mid-term</u> – 50 rural communities; <u>End of Project</u> 80 rural municipalities	63 rural settlements continued mainstreaming pasture management systems and further developed/expanded those.	79% completed Since 22 community pasture plans will only have been completed in 2019/20 it will be difficult to appraise sustainability of maintaining these plans by the end of the project.
<u>Indicator 3:</u> Number of local population (pasture users/farmers, community counsel and staff of local authorities) with improved knowledge and skills to design and operate Pasturelands Management System.	Note: No target set in Logframe, number of trainees depends on number of community members involved in design and operation of pasturelands management system.	392 people (pasture users/farmers, community counsel and staff of local authorities, 8% of which female) improved knowledge and skills to design and operate Pasturelands Management System.	No target set in logframe
<u>Indicator 4:</u> Number of initiatives/projects developed and implemented by village authorities related to improvement of communal pastures' infrastructure and quality of overgrazed pastures	Increased accessibility of quality pastures <u>Targets: mid-term</u> by 10,000 ha <u>End of Project</u> - by 30,000 ha).	72 initiatives /projects developed and implemented by village authorities related to the improvement of communal pastures' infrastructures: - 39.2km of roads to remote pastures - 49 stock watering points for cattle - 22 camping places for cattle - 25 shelters for shepherds/farmers - 7 milking places etc) - rehabilitation of overgrazed pastures (56.5 ha).  As a result, 23,270 ha of pastures became accessible for farms/households involved in animal husbandry,	77% completed
<u>Indicator 5:</u> 80,000 Hectares of pasturelands used under improved land management practices	80,000 ha of pasturelands improved	June 2019 100,000 ha of pasturelands used under improved land management practices	Target achieved and exceeded

## Annex 2: Impact matrix : Livestock development South-North Project (Armenia)

Log Frame target	Impact target December 2020 / Baseline	Impact to 31 <sup>st</sup> December 2018	Notes
<b>Goal: Increased Economic opportunities and incomes of male and female farmers involved in animal husbandry in Syunik and Vayots Dzor marzes.</b>			
<u>Indicator 1</u> : Enhanced incomes of rural population through agricultural production	Enhanced income of 20,000 livestock farmers/producers of which 30% female.	No impact collated to date	
<u>Indicator 2</u> : Increase in income received from milk and meat value chains	Increased by 15% compared to baseline (Baseline- annual income from milk and meat – 2.28million AMD per household	No impact collated to date	
<u>Indicator 3</u> : Increased livestock productivity	20% increase in livestock productivity – annual milk yields per cow, wight of one year old beef cow (baseline: 1,977 litres milk yield and 154kg weight of one year old beef cow)	No impact collated to date	
<u>Indicator 4</u> : Number of new jobs created	New jobs created for 100 persons – 20% female	As of June 30, 2019 in total 14 new jobs created: in established 13 vet points 13 persons work, one more job created in agro-inputs' shop. (By the end of the year another 16 vet points/new jobs will be created)  With the Project support in 11 milk processing SMEs and 6 “lead farms” (by the end of 2019 expected to have created 76 new permanent jobs).	14% completed  Target projected to be reached by end of 2019 with 106 jobs created (13 veterinary, 1 agro-input, 16 additional veterinary and 76 in processing and lead farms
<u>Indicator 5</u> : Number of entities expanding their businesses	30 businesses	With the Project support in 11 milk processing SMEs and 6 “lead farms”	17 businesses by end of 2019 (57% complete)
<u>Indicator 6</u> : Progress in sustainable land management	100,000 Hectares of lands (baseline 40,000ha)	No impact collated to date	
<u>Indicator 7</u> : Increased trade turnover (on dairy and animals between Georgia and Armenia.	Target not available (baseline USD 1.46 million)	No impact collated to date	

Indicator 8: Rural population with enhanced access to agricultural markets and farm support services	85,000 persons (of which 50% female) with enhanced access.	No impact collated to date	
<b>Outcome 1: Livestock farmers/producers benefit from reliable <u>market access</u> and diversified opportunities in the <u>milk and meat local and export markets</u>.</b>			
Indicator 1.1: Number of rural producers (persons, men/women) generating tangible positive income changes due to reliable market access and diversified opportunities in the milk and meat local and export market	<u>Target December 2018:</u> 400 persons (30% female) <u>Target December 2020:</u> 1,500 persons (30% female)	No impact collated to date	
<b>Output 1.1: Expanded more efficient milk collection and meat/cattle buying infrastructure available</b>  <u>Indicator 1.2:</u> Improved milk collection or meat/cattle buying infrastructure or operations	<u>Target December 2018:</u> 5 SMEs milk/cattle/meat Processors / buyers that invested in infrastructure or operations (including optimization of the productive use of materials, energy, water etc., consultancy to farmers) <u>Target for December 2020:</u> 15 SMEs	Started in 2018: 5 SMEs involved in the milk market (3 milk processing companies and 2 milk processing co-operatives) developed investment plans and starting investment  53 market actors identified (19 milk collectors and 34 processors)	On target
	<u>Target December 2018:</u> 5 improved or established infrastructure or operations <u>Target for December 2020:</u> 15	5 investment plans developed and being implemented (by June 2019)  Another 7 beneficiary SMEs in process of implementing investment plans, expected to complete by the end of 2019.	On target
	<u>Target December 2018:</u> 14 rural settlements have improved access to milk/cattle markets in the result of project interventions <u>Target for December 2020:</u> 48 rural settlements	As a result of the 5 investment plans 14 rural settlements will improve access to the milk market  Projected: By the end of 2019 another 44 rural settlements will improve access to milk market.	Good progress and targets being reached

<b>Output 1.2: Dairy and meat business operators developed and implemented export plans.</b> <u>Indicator 1.3:</u> Number of SMEs (dairy processing companies/cattle/meat traders) developed and implemented export plans	<u>Target December 2018:</u> 1 SME  <u>Target for December 2020:</u> 5 SMEs	In 2019 one Processing SMEs started exports to Georgia. Export plans included in 5 investment plans.	On target
<b>Output 1.3: Established consolidation services for smallholder farmers</b> <u>Indicator 1.4:</u> Number of 'lead' farmers established and providing consolidation services	<u>Target December 2018:</u> 2 lead farmers providing consolidation services. 8 rural settlements covered.  <u>Target for December 2020:</u> 10 lead farms providing consolidation services. 40 rural settlements covered	2 lead farms will be ready and will start operations by June 2019.	On target (having operations already running was probably too optimistic) but good progress being made.
<b>Outcome 2: Livestock farmers benefit from improved access to <u>inputs and business development services and enhanced regional linkages</u></b>			
<u>Indicator 2.1</u> Number of rural producers generating tangible positive income changes due to improved access to inputs and business development services and enhanced regional linkages	<u>Target December 2018:</u> At least 1000 persons (50% female)  <u>Target for December 2020:</u> At least 5,000 persons (20% female)	No impact collated to date	
<u>Indicator 2.2</u> Increased trade turnover (on farm inputs) between Georgia and Armenia as a result of new market linkages established	No targets provided	No impact collated to date	Is this a realistic indicator for the project?
<b>Output 2.1: Private veterinary points established and operated in the project area</b> <u>Indicator 2.3:</u> Number of private veterinary service points established and operating in project area	<u>Target December 2018:</u> 10 new vet points serving 23 rural settlements  <u>Target for December 2020:</u> 40 new vet points serving 88 rural settlements	10 new vet points serving 23 rural settlements.  As of June 2019, 3 additional new vet points established and started operations. Another 22 vet points are in process and will be ready and operational by the end of 2019.	On target

Indicator 2.4 Number of newly established private veterinary points ensure quality of provided services	<p><u>Target December 2018:</u> 10 new vet points providing basic services, 10 new vet points have appropriate resources to provide services, 10 new vet points ensure efficiency of operation.</p> <p><u>Target December 2020:</u> 40 new vet points providing basic services, 40 new vet points have appropriate resources to provide services, 40 new vet points ensure efficiency of operation. 75% customer satisfaction.</p>	10 new vet points established and will start operations in 2019	On target
<p><b>Output 2.2 Market linkages established between wholesalers (including from Georgia) and retailers of farm inputs</b></p> <p><u>Indicator 2.5:</u> Number of issue specific cross border initiatives</p>	<p><u>Target December 2018:</u> 0</p> <p><u>Target December 2020:</u> 3 initiatives</p>	The Project team started collaboration with ALCP project to identify areas for cross border initiatives. Preliminary agreements made for establishment market linkages between Armenian dairy producers and Georgian wholesalers/retailers. Joint capacity improvement activities for veterinarians and development of cattle surveillance points were initiated.	On target
Indicator 2.6: New market linkages established between wholesalers (including from Georgia) and retailers of agro-inputs in project area	<p><u>Target December 2018:</u> 0</p> <p><u>Target December 2020:</u> 4 new market initiatives</p>	In May 2019 with the support of the Project one agro-inputs' shop established and started its operation.	Potentially on target
<p><b>Output 2.3: Improved quality of cattle through Animal Replacement</b></p> <p><u>Indicator 2.7:</u> the quality of cattle farms improved through animal replacement</p>	<p><u>Target December 2018:</u> 0</p> <p><u>Target December 2020:</u> 600 cattle of better quality purchased by farmers through animal replacement.</p>	To improve genetics of cattle and increase the number of cows in Northern Armenia so far 201 heads of cattle were purchased by 52 farmers (of which 13 women).	Appears on target
<b>Outcome 3: Livestock farmers/producers benefit from sustainable natural resource management</b>			
Indicator 3.1 Number of rural producers generating tangible positive income changes	<u>Target December 2018:</u> 1,500 persons (30% female)	Achieved: 2,000 persons (30 % female)	Target achieved and exceeded

due to sustainable natural resource management	<u>Target December 2020</u> : 15,000 persons (30% female)	By June 2019: Pasture management plans developed and put in use in 10 rural settlements where 784 households (or about 2,100 people) are involved in animal husbandry and use communal pastures. Female comprise about 1/3 of population (30% will be adjusted in upcoming reporting period).	
<u>Indicator 3.2</u> Quantity of lands used under improved land management practices	<u>Target December 2018</u> : 15,000 Ha <u>Target December 2020</u> : 100,000Ha	Achieved by December 2018: 31,160 Hectare  During the first year of the Project implementation pasture management plans were developed for those rural settlements with large pasture areas. During upcoming years of Project implementation acreage of pasture areas will not be increasing.	December 2018 Target achieved and exceeded by more than twice.
<b>Output 3.1: Local actors/ representatives of target groups improved knowledge and skills to design, operate and improve land management strategies and plans.</b> <u>Indicator 3.3</u> : Number of target groups' representatives (pasture users/farmers, community council and staff of local authorities) with improved knowledge and skills to design, operate and improve land management strategies and plans.	<u>Target December 2018</u> : 100 persons (30% women) <u>Target December 2020</u> : at least 250 persons (30% women)	Achieved: 116 persons (15% women)  Note: Project team will put additional efforts to increase women's participation in capacity improvement activities.	Total number target reached and exceeded. Number of women only partially achieved
<b>Output 3.2: Environmentally friendly practices or improved procedures for land management are being implemented.</b> <u>Indicator 3.4</u> : Number and type of introduced environmentally friendly practices or improved procedures for natural resources management.	<u>Target December 2018</u> : At least 1 environmentally friendly practice introduced /improved procedures (pasture management, fodder production etc.) in 10 rural settlements (at least one in total and at least 1 per community).	1 environmental practice introduced in 10 rural settlements – 1 rural pasture management plan implemented in 10 communities	Target achieved  On target: 10 pasture plans developed and 1 practice put into use by December 2018

	Target December 2020: 2 environmentally friendly practices introduced/improved in 88 rural settlements.		
<b>Output 3.3 Improved infrastructures in pastures</b> Indicator 3.5: Number and type of improved infrastructure in pastures	Target December 2018: 0  Target December 2020: 170 units (e.g. water points, roads etc.)	No target for 2018	In target areas, based on requests from communities and rural settlements, the process of developing layouts and budgets of the pastures' infrastructures started. Construction works will start in July 2019. Delay is explained by sophisticated procurement procedures prescribed by state for communal/state funding sources.

### **Annex 3: Future ownership of the Syunik Animal Market:**

The Syunik Animal market was set up by the project in a more traditional direct-delivery model – where the project effectively owns and controls the market- rather than using facilitation with a clear exit and ownership strategy. A valuable asset has therefore been created (buildings and land) with no clear future ownership.

The market is currently providing an animal sales service which is not commercially viable (in terms of sales turnover and revenue). The market also provides space for an agro-input company (rent free at present) and a small restaurant (operating

There appear to be 4 potential options for ownership:

- 1) Handing over ownership the Animal Market to government: This is often a default position for assets that result from development interventions where ownership is unclear. For the animal market, this would potentially be the local government (Marz) although it is unclear what department of government such an asset would come under. Operating an animal market (or the services within the market) is not a core role of local government and it is highly unlikely that this would result in the market developing and being sustained. The likely outcome of this would be the closure of the market.
- 2) Sale of the market to the private sector: The model of the animal market has not been proven and is currently not a viable commercial operation. Finding a buyer would potentially be difficult. Even if a buyer was found for the animal market, there is danger that this is only purchased for the asset value of the land and buildings and the asset would not continue as an animal market. Selling the animal market as a going business concern would require the testing and proving of the commercial model for animal sales and building revenue, turnover and profitability. This would be a significant task which cannot be achieved by the end of the project. The buildings themselves have a commercial value for catering and tourism and partly as a rentable asset to tenants (such as the agro-input company). A commercial buyer of the whole asset would potentially focus on this commercial opportunity rather than the animal market component.
- 3) Handing over the asset to a non-profit (NGO) with a focus on livestock development: This option also has a number of challenges. There are few non-profits with an animal livestock focus who would be able to take on the animal market and even fewer who would have a sustainability orientation to build this to a point of sustainability. This therefore does not appear to be a viable sustainability option.
- 4) Handing over to SDA as an asset for livestock development in Syunik Marz: Potentially the most viable option for the animal market would be to hand ownership over to SDA under a contract to develop this as an asset for agricultural and livestock development. SDA should avoid the route of developing this as either a monopoly or in direct competition to existing or potentially emerging services. The market should be used to support market actors to develop and roll out new services not as a place where SDA becomes a market actor.

The fourth option potentially looks the most viable way forward. If this was chosen, then it is recommended that SDA develop a clear proposal and ‘business plan’ for the market that would then be the foundation for a contract for developing the asset as a location for livestock promotion.

## **Annex 4: TORs for the review**

**External Review**  
**of the**  
**“Livestock Development in the South of Armenia” Project**  
**Phase 4**  
(7F-03199.04)  
**and**  
**“Livestock Development South-North” Project**  
**Phase 5**  
(7F-03199.05)  
**Terms of Reference**

### **1.1 CONTEXT OF THE REVIEW**

Inclusive and Sustainable Economic Development is one of the core areas of intervention under the Swiss Cooperation Strategy for the South Caucasus, which aims at reducing economic disparities, supporting the transition process and fostering cross-border economic linkages. A number of SDC's interventions in the domain of Economic Development are based on a so called *making markets work for the poor* approach (M4P) to assure improved performance in relation to outreach, impact, social inclusion and sustainability of the different projects as well as a stronger coherence of the whole portfolio.

The first phase of the project (2006-2008; CHF 300'000), established a successful Public Private Development Partnership with the Goris-based cheese company “Elola”, which committed itself to buying milk from the farmers on a regular basis and invested financially into milk collection network. SDA supported farmers in selected communities to improve their access to markets, veterinary services and good animal care practices, with the overall objective to improve the quality and production of milk and thus generate increased incomes for farmers. During the up-scaled second phase (2008-2011), the project addressed the major systemic constraints of the livestock sector development beyond the dairy sector. Building on the successful relationship with “Elola”, links with other private market players in the dairy and meat value chains were established. The project focused on technical assistance for farmers, farm support services (artificial insemination, animal replacement and access to inputs), access to markets (milk and meat) and finance, and local governance aspects relevant for the development of the livestock sector. The project covered 16 distant rural communities in the Goris district with a total of 3'100 households (or 13'600 persons). As a result of project intervention, the use and cost-efficiency of artificial insemination increased dramatically. The number of market transactions in the field of agricultural and veterinary inputs rose, leading to a generally improved access to markets and veterinary services. This allowed hundreds of indirect beneficiaries to improve their practices. Income increased at farmer's household level. The good results and managing capacities of SDA led to the decision to expand the geography of the project to the neighboring region for the third project phase (where another project in the livestock sector has been implemented by the Accion contra el Hambre). A unified comprehensive approach towards all target communities (24 in Sisian and 16 in Goris) with a total population of about 7'000 households (or 31'000 people) allowed to use the best experiences of the two

projects by mutually replicating them in areas previously not covered, with a very favorable cost effectiveness ratio. 4'500 farmers directly benefit from project services, which enable them to further increase their yearly income. During the 3<sup>rd</sup> phase (2011-2014) the project concentrated on the livestock sector, on the milk and meat value chains, where the majority of the population of the region was involved. The project assumed the role of a facilitator outside the market system. The intervention was based on a comprehensive sub-sector analysis, which has identified potential constraints of the sector. The project addressed the issues of market access for milk and meat, access to farm support services, farmers' capacities and skills, and performance of local authorities in the livestock sector development (agricultural data management and processing and pasture management).

Based on very good results and at the request of the Government (Ministries of Territorial Administration and Development and Agriculture) to expand the project geographically the current 4<sup>th</sup> phase of the project (2014-2020) has been expanded and covers two Southern provinces of Armenia with 100 target rural settlements with nearly 60'000 population mostly involved in animal husbandry. It was expected that covering a large territory of Southern Armenia (100 rural settlements with 75% of the whole rural population) and strengthening market links, public and private services, knowledge and skills of beneficiary farmers would allow to have a greater impact on all levels (economy-of-scale): farm, community, region and national level.

Later on in 2017 at the request of the Government and with the agreement of the Austrian Development Agency to co-finance the project a decision was taken to expand the project even further to four Northern provinces also covering another 100 rural settlements with a population of 85 000 people. The duration of this phase is aligned to phase 4 and will last until end-2020. The Northern project has a focus on regional dimension and is supposed to establish and enhance cross-border linkages between the value chain actors the border between Armenia and Georgia.

The focus of the project under both/current phases is slightly different. Unlike the M4P target small livestock farmers (in the South/phase 4) the project in the North/phase 5 is focusing on providing direct support to the processing companies and other SMEs in the value chain.

## **1.2 PURPOSE AND OBJECTIVES OF THE REVIEW<sup>18</sup>**

A mid-term external review will be carried out to assess to the largest extent the results of the fourth project phase and lessons learnt, and to the extent possible (due to the start of phase five in the beginning of 2018) the fifth phase of the project, it shall support SDC and the project partners in the possible future continuation of interventions, will consolidate and sustain the project's major achievements and provide recommendations for the future.

The review will assess the "theory of change" adopted by the project, whether it has proven to be relevant, whether it has been confirmed by the evolution of the program, or if it has been deficient and in which respect.

Furthermore, the assessment will appraise the effectiveness of the project, the relevance of its approaches (South and North), the sustainability of its activities and the appropriateness of the implementation set-up aiming at drawing lessons regarding the project context, and to provide recommendations for the future implementation of the project.

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<sup>18</sup> This assessment will enable the consultant to collect all the necessary data to produce a case study for the SDC and the project team presenting the scale of supported interventions, the approach, outreach, impact and sustainability. Separate TOR will be prepared for the mentioned exercise, however it will be implemented by the same consultant.

The following guiding questions are to be addressed by the review team:

### 1) Effectiveness and relevance of the intervention

- a) What have been (and currently are) the major challenges and potentials of the chosen sub-sector in terms of market development? How has the project team addressed those challenges? What are the lessons learnt?
- b) Was the application of the M4P approach appropriate considering the context? Did it address the right players and factors?
- c) Who are the market players the project is working with? How does the project engage with them? Who are they in terms of social stratification, gender, wealth and income distribution?
- d) Which farmers have benefited from the project and which ones were not reached, and why so?
- e) To what extent has the **goal** been achieved, in particular: Has the volume and quality of production of farmers engaged with the project increased, and at what quantity? Has their income increased because of that? How is the additional income used within the family (consumption, investment, etc.) and how are decisions taken in this regard (incl. role of women)?
- f) To what extent are the **outcomes** of the project realized, in particular: Has the access of farmers to markets improved? How did important market factors develop and impact on the livestock sector and farm level: prices, quality features and requirements, closed borders/trade policies of domestic and foreign markets? Has the access of farmers to services (inputs, AI, fodder, extension, mechanisation, processing, financial) improved? Has the demand from the farmers increased? Are the farmers satisfied with the services received? Has the performance of service providers improved? Have the knowledge and capacities of farmers in farm management and new approaches to agriculture improved?
- g) How did the **supply side** of services develop? Have the capacities of suppliers and the quality of their services provided to the targeted farmers increased? What has changed concretely (both from a perspective of suppliers and clients)?
- h) How do suppliers assess the support provided by the project to increase their capacities and what has changed in their way of designing/providing services?
- i) How has the project succeeded in scaling up and outreach of the project activities?
- j) How were the **transversal themes** mainstreamed in the project intervention (gender, governance, DRR) and with what results?
- k) What has been the role and contribution of state actors, in terms of spurring investment in market infrastructure, of enabling the environment of livestock value chains, of extension services, of ensuring animal health and food safety? Did the project contribute to increase their capacities (outcome 4)?
- l) Has the **context** been sufficiently considered in the design, approach and implementation of the project?
- m) What was the impact of the project on the social situation of the farmers in the target regions?
- n) Is there any evidence that the activities supported by the project (in any way) influence the farmers to stay in Armenia?
- o) For the **project extension in the North**: To what extent were the experiences and the lessons learnt of the South transferred and applied in the North?
- p) For the project extension in the North: How do you assess the challenges and the potential of cross-border effects between Armenia and Georgia for the project?

### 2) Efficiency of the operation, relevance of the organisation structure

- a) How can the overall performance of SDA as the project implementing agency be assessed?

- b) How do you assess the cost efficiency of the project (in terms of outputs achieved)?
  - c) How can the efficiency of the project implementation structure (office in Yerevan and sub-offices in the regions) be judged?
  - d) How can the performance of the project team in applying the M4P approach be assessed?
  - e) How can the project's ability to adapt to the changing market situation be judged?
  - f) How the project team insured the connection between the interventions in the South and in the North?
  - g) What are the cooperation mechanisms with the ALCP project in Georgia ?
  - h) How project cooperates with the other SDC project / Local Governance ?
- Has the full potential of synergies between the project and the LSG project been exploited?

### 3) Sustainability of the intervention

- a) Which components/aspects of the project have the highest potential in terms of sustainability, and which the least?
- b) What is the potential for strengthened market-linkages within the value chain, notably (a) (upstream) new investments / co-investments to stimulate innovations and integrated sustainable natural resource management tools and practices (incl. pasture management ) and (b) (down-stream) income-generating opportunities for rural population through the development of agro tourism in communities (such as skills development, improved tourism infrastructure and facilities, as well as destination marketing)
- c) What recommendations can the review team make with a view to improve project results, improve scaling up and increase their sustainability?

### 4) What were the lessons learnt to be applied in the follow-up phase, or by other projects?

Which important lessons can be drawn with regard to (1) the environment and the market/production potential of the selected value chains, (2) the strategy and approaches applied by the project, (3) the interaction with local and national partners, state and non-state; (4) the consideration of transversal themes, etc. (5) degree of implementation and accuracy of recommendations from the external review conducted in the previous phase; (6) potential for cross-border linkages at every stage of the value chain

Based on the review of the project, the team shall present **recommendations to strengthen sustainability of the achievements and for possible future interventions.**

## 2. SCOPE AND METHODS OF WORK

The review will be conducted by an international consultant. The consultant will make use of information given by the project team and SDC staff, beneficiaries, local authorities, international organizations, private businesses, and local NGO partners, other SDC projects as well as other relevant market players.

The main tasks of the assignment can be summarized as follows:

- a) Desk Research (information collection and analysis)

Relevant documentation includes:

- Credit proposals
- Project documents
- Project reports and studies
- External evaluation 2014
- Swiss Cooperation Strategy for 2017-2020

- Beneficiary Assessment 2017
- d) A briefing at Swiss Cooperation Office (SCO) in Yerevan with the Senior Program Officer at the beginning of the mission to Armenia (Werner ???)
- e) A briefing with the representative of the Austrian Development Agency
- d) Meeting with partners
- e) Field trip to the regions (South, North)
- f) An end-of-mission workshop with the project team and SDC to discuss the lessons learned and the project development
- g) A debriefing at Swiss Cooperation Office in Yerevan

#### 4 DELIVERABLES / REPORTING

The International Consultant is expected to produce the following deliverables:

- 1) Presentation of the findings and recommendations to be discussed during the final debriefing session.
- 2) The review report to be submitted electronically within 20 working days after the mission in Armenia, reflecting all aspects to be reviewed as mentioned in chapter II. It shall contain a brief description of the applied working methodology as well as separate chapters dedicated to the key findings and recommendations. The report shall be written in English (Arial 11) and not exceed 15 pages (without executive summary and annexes).

The key conclusions and recommendations shall be presented and summarized in an annex of the report.

#### 5. DURATION AND IMPLEMENTATION ARRANGEMENT

The external reviews will take place in June 2019.

The following table gives an indicative overview of the work schedule and allocated time:

<i>Task / Activity</i>	<i>No. of days</i>
Research & analysis of relevant documents	3
Field assessment and elaboration of draft findings (incl. debriefing workshop) 2 days in Yerevan, 5 days in the South, 5 days in the North	12
Briefing and debriefing at SDC Office in Yerevan	1
Report writing	8
International travel	2
Travel in Armenia ½ day travel to the South, 1 day travel to the North	1.5
Total amount (maximum)	up to 28

The exact work schedule and time allocation is subject to negotiations between SDC and the International Consultant when concluding the contract.

The International Consultant is not exclusively responsible for the logistical and administrative organisation of the mandate. The Swiss Cooperation Office and SDA will provide all logistical support for the mission in Armenia (hotel booking, transport, interpretation services, scheduling meetings in and outside of Yerevan, etc).

## **Annex 5: List of documents consulted**

### **General**

- Swiss Cooperation strategy 2017-2018
- Study of SCO Beneficiaries in Rural Armenia and Georgia, ACT, August 2017

### **Livestock Development in the South of Armenia**

- Project credit Proposal
- Project Proposal with annexes
- External project Review April 2014 (covering December 2011 to June 2014)
- Project impact assessment report 2018
- Progress report: 1<sup>st</sup> September 2015 – 29<sup>th</sup> February 2016
- Progress report: 1<sup>st</sup> September 2015 – 31<sup>st</sup> August 2016
- Progress report: 1<sup>st</sup> September 2016 – 28<sup>th</sup> February 2017
- Progress report: 1<sup>st</sup> September 2017 – 28<sup>th</sup> February 2018
- Progress report: 1<sup>st</sup> September 2017 – 31<sup>st</sup> August 2018
- Progress report: 1<sup>st</sup> September 2018 – 28<sup>th</sup> February 2019
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### **Livestock Development in Armenia: South-North Project**

- Project Credit Proposal
- Project Document with annexes
- Project time schedule
- Baseline study report: Livestock Development in Armenia South North march – May 2018
- Gender analysis report 2018
- Progress report: 15<sup>th</sup> December 2017 – 30<sup>th</sup> June 2018
- Progress report: 15<sup>th</sup> December 2017 – 31<sup>st</sup> December 2018

## **Annex 6: List of interviews and communities consulted**

### **Northern project**

#### **1) Gegharkunik Marz**

##### Jambarak Centre of enlarged community

- Meeting with department Head Natura protection, agriculture and economics.
- Lyuda Balyan SP Milk Processing/Cheese factory

#### **2) Lori Marz**

##### Lori enlarged community

- Head of Department of Agriculture and Nature Protection in Lori Enlarged community
- Garik Gevorgyan, Veterinarian Lejan Village, Lori Marz
- Farmer and beneficiary of Animal replacement in Loro Marz
- Vigen Grigoryan SP Milk processing company Lori Marz

##### Tashir Enlarged Community, Lori Marz

- Representatives of the self governing body – Tashir
- Spot visit and consultation with 2 smaller and poorer female headed farming households.
- Lead farmer: Vahan Gregoriyan Lori District
- Duster Melania LLC Dairy Processing Company, Tashir, Lori District – Rubik Harutyanyan (co-owner/manager)

#### **3) Shirak Marz**

##### Amasia Enlarged Community:

- Jemma Harutyunyan (Head of community) and Arthur Manukyan (deputy head of community).
- Voske Ser LLC Ardenis dairy processing factory

### **South Project**

#### **Vayats Dzor Mars**

##### Yelpin Village

- Yelpin village group meeting/ head of community, Areni community
- Erpin Cooperative, Dairy Processing Yelpin Village – Artur Nazaryan
- Yelpin Veterinary service

##### Khachik Village, Vayots Dzor: A small and more remote mountain village

- Focus group meeting with 8 farmers and village leaders

##### Central Marz authority

- Hivik Avagyan: Head of State Service for Food Safety, Vayots Dzor

##### Bardzuni Village, Vayots Dzor – a small and remote village

- Joint focus group meeting with vet, 6 farmers and municipal representatives
- Bardzuni Village vet: Hrachik Malkhasyan – one to one meeting and discussion

##### Gomk Village, Vayots Dzor

- Group meeting with 5 farmers and village representative

- Gomk Village Milk collection point Hrachik Malkhasyan

#### Aghjadzor Village, Vayots Dzor

- Aghjadzor Village vet, Vayots Dzor: Mr Loris Yeghyan
- Aghjadzor village co-op milk collection and processing
- 4 Aghjadzor framers

#### **Sisian, Syunik marz**

- SDA Sisian project team discussion
- Sis Alp – Processor in Sisian: Husik Stepanyan
- Sisian Municipal leadership

#### Shaqi Village Sisian

- Vet service Mr Shashik Haruytyunyan
- Focus group discussion: 4 farmers and village representative

-SDA Cattle Market – SDA management

#### Bernakot Village, Sisian

- Bernakot Village Milk processing unit – manager
- Bernakot Kat- Cheese factory, Sisian
- Bernakot Village Head and 4 farmers – group meeting
- Bernakot Village – AI technician

#### **Goris Syunik Marz**

##### Harzis Village , Goris

- Harzis milk Collection point and fodder milling service

#### Tegh Municipality, Goris

- Tegh Municipal authorities
- Veterinary in Tegh – Aragats

#### Goris Town

- Elola Milk Processing factory, Manager
- Goris State Agricultural college, Nune Avetisyan

Meeting with SDA Management- Karina on project management and operations