ALCP | Alliances Lesser Caucasus Programme

ALLIANCES LESSER CAUCASUS PROGRAMME

Impact Assessment 2016

Kvemo Kartli

Designed, managed and produced by Zakaria Tavberidze & Alekhsandre Jishkariani with TESI and with editing by ALCP Team Members

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SECTION 1: OVERVIEW OF THE IMPACT ASSESSMENT

The Alliances Lesser Caucasus Programme in Kvemo Kartli region is an SDC funded Mercy Corps Georgia implemented market development programme run in accordance with the M4P approach working in the dairy, beef and wool value chains since 2011. The second phase started from 2014 and continues until March 2017. The total number of rural households, who were potential beneficiaries of the programme, amounted to 61,576 HHs[1].

The Impact Assessment Survey of the programme was carried out in October 2016. The detailed methodology for the survey can be found in Annexes A and B at the end of the document.

The objective of the study was to assess the programme effect on major target beneficiaries: i.e. small scale livestock producers in the Kvemo Kartli region. The programme was designed to impact a large number of beneficiaries i.e. Small Scale Livestock Producers (SSLP's) through leveraging entry points with private sector and government market actors; however along with farmers the programme has impacted other market players in target sector (copying and crowding in) and as well effecting broader sector development. Therefore, the study aimed to summarize all sizable effects on the livestock sector (For more information see annex B7).

The main data source of this analysis is the 'October 2016 Impact Assessment Survey (farmer level)'; however, for further justifying the programme attribution, triangulated data from three different sources results were exploited:

1. Programme clients' data - for business related financial indicators;
2. Annual qualitative impact assessment data per intervention - for further justifying the programme attribution (farmers are asked directly how beneficial the intervention was for them);
3. Mini surveys' data
4. National statistics Office of Georgia - for capturing the programme contribution in the sector development[2].

Table 1: Key indicators of changes examined during the Impact Assessment

Statistically representative information was collected from: 204 women (51%) and 196 men (49%). The majority of respondents (the most informed persons within the households regarding agriculture) were above 45. The average size of household is 4.77. The main factor which has influenced outcome has been the ability to speak Georgian language. Those who spoke Georgian represented 56% of the surveyed population and those who did not - 44%. The representatives of the first group have higher access to life chances and are more likely to be affected by the programme activities (For more information see annex A).

[1] Census 2014: The percentages of measuring the scale are against this number: 61,576 rural households.
[2] http://geostat.ge/

KEY FINDINGS OF THE RESEARCH

- Up to **67% (41,256** HHs) of the target rural population used at least one of the programme facilitated services;
- Up to **49% (30,018** HHs) of the target rural population generated tangible positive income change due to the programme facilitated services;
- From 2014 to 2016 there has been a general decline in total HH income in rural Kvemo Kartli, however the programme beneficiaries were far more resistant to the fluctuations of economy than non-beneficiaries; In total, farmers' net additional attributable income from 2014 to 2016 amounted **9,527,820** Gel / **4,676,420** USD;
- There was obvious synergistic effect: There is positive linear relationship between number of interventions used and generated additional monetary income. E.g. Those households who used only one intervention had **535** Gel / **623** USD income from livestock related activities, while for those who used more than three interventions income amounted more than **4,016** Gel / **1,971** USD;
- From 2014 to 2016 number of cattle and amount of land cultivated for hay making decreased across the entire population, however programme beneficiaries maintained their number of cattle (On average, **3.6** cow) and cultivated the same amount of land (On average, **1.4** ha).

SUMMARY OF THE RESULTS IN KVEMO KARTLI REGION		*From 2014 to 2016*
Scale: Number of beneficiaries served *(direct beneficiaries & outside programme area & export)*	Rural households served	**41,256**[3]
	Average % of Rural households with women members served (average across all interventions)	**44%**
Net attributable income generated for programme beneficiaries - GEL	For all Households served	**9,527,820 Gel (4,676,420 USD)**
# of programme clients		**23**
# of programme supported entities[4]		**203**
Net attributable income generated for the programme clients		**3,240,687 Gel (1,748,028 USD)**
# FT Job equivalents		**153 (57 women / 96 men)**
NAIC generated for employees		**1,298,326 Gel (700,317 USD)**
Indirect Benefits of the Interventions: # of entities		**25**
Indirect Benefits of the Interventions: # of rural households served		**61,603**
Indirect Benefits of the Interventions: SSLPs' NAIC		**2,265,691 Gel (1,222,114 USD)**

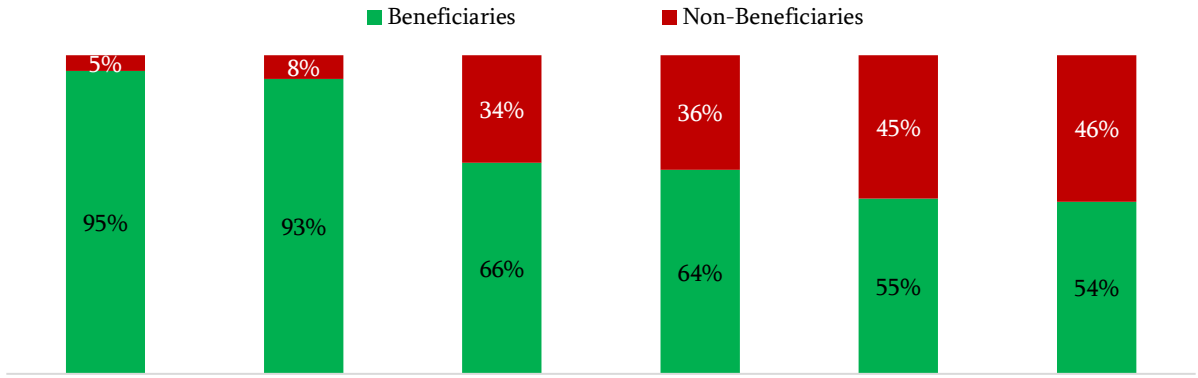
[3] Apart from that KK interventions become national and served approximately 400,000 HHs outside the programme area.
[4] Vet pharmacies, bull service providers (SP's), machinery (SP's) and information (SP's).

SECTION 2: PURPOSE LEVEL IMPACT

In Kvemo Kartli region **41,256** (**67%** of entire population) rural households[5] used at least one of the programme facilitated services or goods. On average per intervention **44%** of the users were women independently or together with other HH members. **30,018** (49% of entire population) rural households generated tangible positive income changes and benefited financially from the programme through direct interventions facilitated through **47** clients and **254** supported entities. To sum up the impact from 2014 to 2016, direct beneficiaries of the programme generated additional 9,527,820 Gel / 4,676,420 USD[6].

The programme covered all **118** communities in the area by the facilitated services, i.e. in each community there is at least one person who used the programme facilitated services. **67%** of the total rural households used, on average, two ALCP facilitated services. However, this figures varies across the municipalities: In Testitskaro and Tsalka municipalities more than **95%** of the population are the programme beneficiaries. In the rest of the municipalities the same percentage amounted **60%,** on average (See table # 3).

Table 3: Programme beneficiaries by municipalities (% out of whole sample)

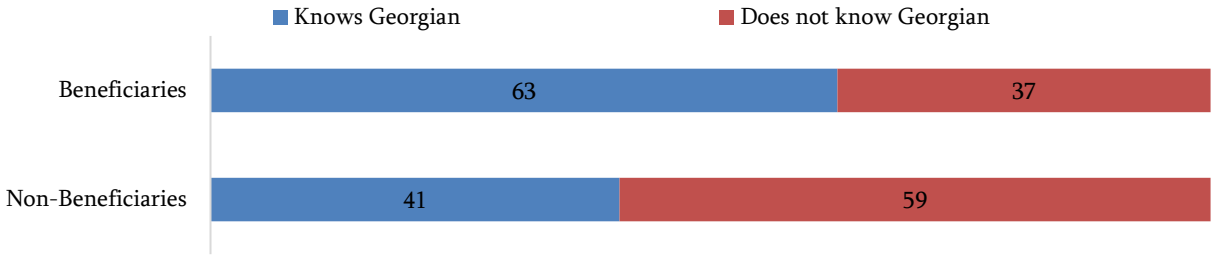


It seems that there is a correlation between knowing Georgian language and access to the services. Within the beneficiary group the share of farmers knows Georgian (63%) is more than in the Non-Beneficiary Group (41%). This might be the explanation why the highest rate of beneficiaries is in Tetritskaro and Tsalka, - where majority of farmers are ethnic Georgian - and lower in ethnic diverse regions - where majority of the farmers do not know Georgian (See table 4).

[5] According to the census 2014 the target population of rural households of Kvemo Kartli region amounted 61,571 HHs. This figure decreased by 24% compared to the census 2002.

[6] Farmers' income for 2014-2015 is estimated and comes from monthly data sheet. The impact assessment showed that in 2016 farmers' income amounted **3,960,568** Gel / **1,673,442** USD.

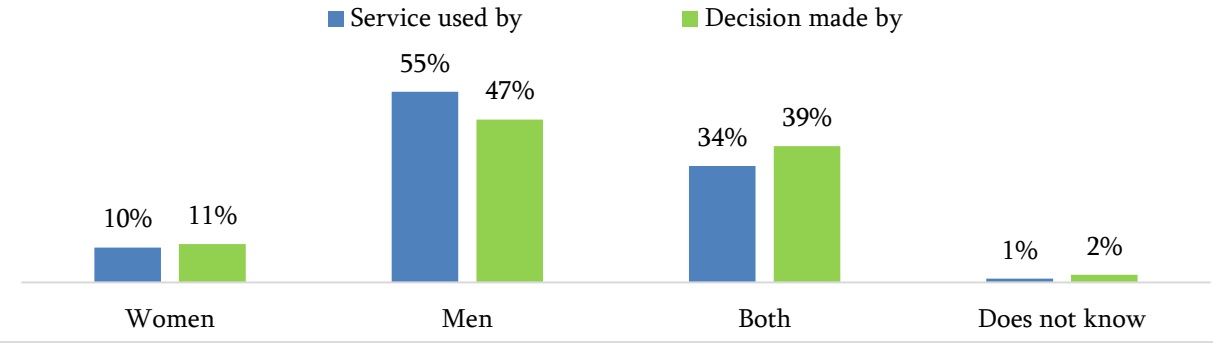
Table 4: Knowing georgian language and usage of the services (%)



2.1. Gender Usage per Intervention

From 2014 to 2016, average number of women using the ALCP facilitated services increased from **36%** to **44%**. The impact assessment showed, that in **44%** of the total target beneficiary HH's women independently or together with other HH members used at least one of the programme facilitated services. To be more precise, on average per intervention in **10%** of beneficiary households only women used the programme facilitated services, in **34%** services were used by both genders and in **55%** men were the sole users in a HH. Women are even more involved in the decision making in context of usage of services: On average, in **50%** of the households decisions are made by women or together with other households' member (See Table 5).

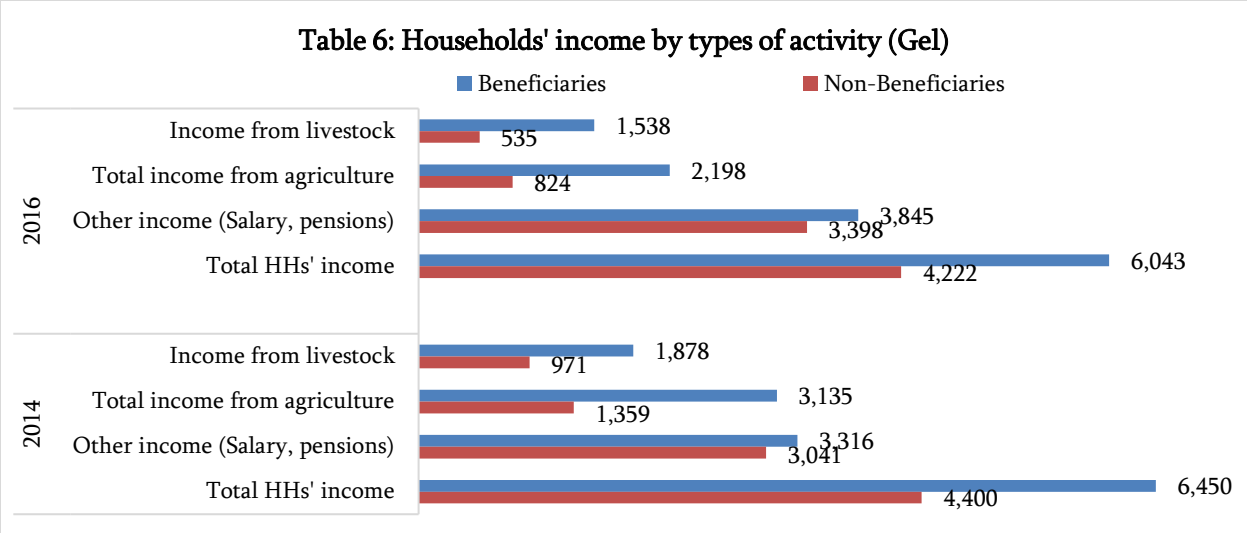
Table 5: Usage and Decision Making Relevant to the Services by Gender (% out of whole sample)



2.2 Net additional income generated by the programme

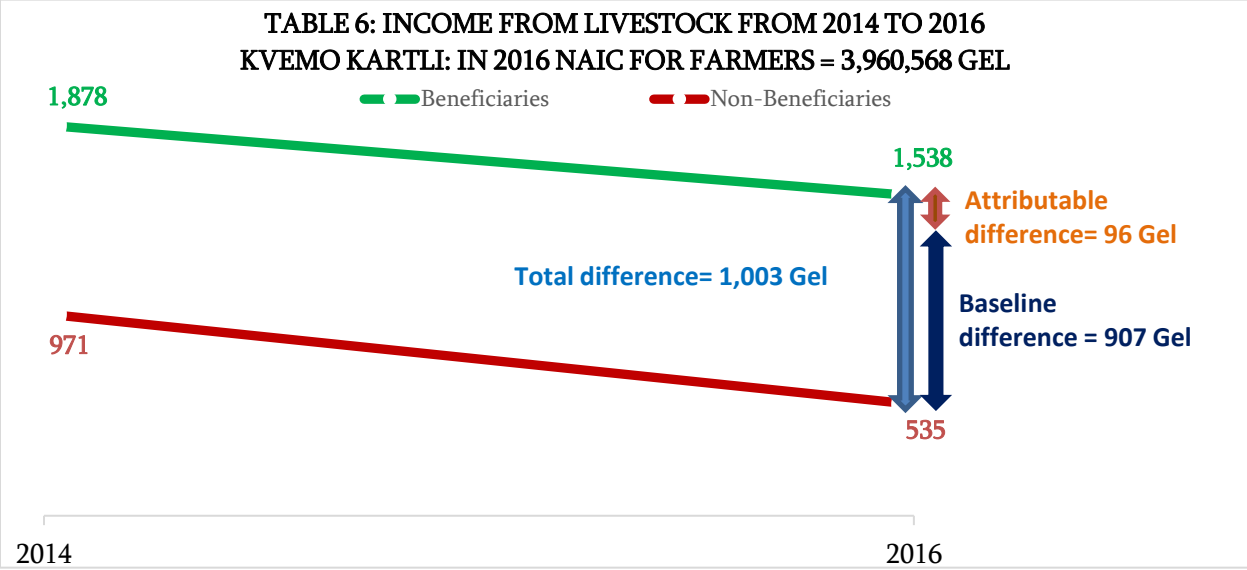
In 2016 in Kvemo Kartli region the ALCP beneficiary farmers generated **3,960,568** Gel / **1,673,442** USD net additional attributable income. The impact assessment data presents a picture of an overall decline in HH income derived from livestock related activities in rural HH's in Kvemo Kartli (See table 6)[7]. However, programme beneficiaries were far more resistant to the fluctuations of economy than non-beneficiaries.

[7] So far, National Statistics Office of Georgia does not have updated actual data regarding the household's income from livestock in Kvemo Kartli in 2016. So, as soon as the GeoStat data is available, it will be triangulated with the impact assessment data.



Although, the impact assessment lacked the wider variables to definitively prove the reasons for this decline in the household income, the programme experience shows that in 2016 the main factors affecting income were the devaluation of the Georgian Lari against the dollar and the closing of the Azeri border for 6 months in 2016 to trade cattle.

In Kvemo Kartli region, across the entire population, from 2014 to 2016 the livestock related income of rural households decreased by **24%**. Although, for those who used ALCP facilitated services from 2014 to 2016 income decreased by **18%**, while the same figure for non-beneficiaries group amounted to **45%**.[8] This difference is the monetary benefit of the beneficiaries, which in 2016 amounted **3,960,568** Gel / **1,673,442** USD net additional attributable income (See table 6[9]).



[8] The impact assessment has not enough variables to explain the reasons of the decreased income. Currency crisis of Gel and temporary limitations of the cross border trade in Ajerbaijan might be among these reasons, however these hypotheses need further qualitative research to be proved.

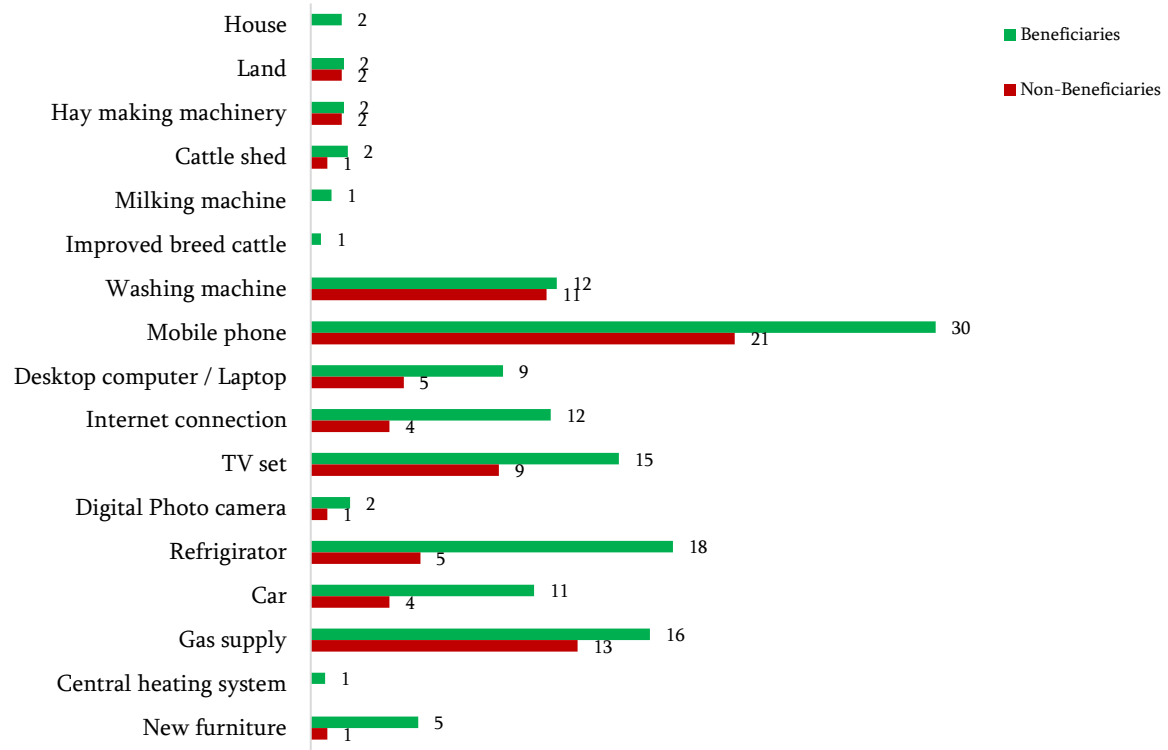
[9] Baseline difference is which already existed in 2014, however at that time some of the farmers were ALCP beneficiaries and during the impact assessment 2014 in Tetritskaro, Tsalka and Dmanisi this difference was already attributed to the programme.

In total, from 2014 to 2016 net additional income for beneficiary households amounted **9,527,820** Gel **/ 4,676,420** USD. Also, the programme generated **2,265,691** Gel / **1,222,115** USD NAIC for indirect beneficiaries (Users of crowding in entities), **3,240,687** Gel / **1,748,028** USD for the clients / supported entities and **1,298,326** Gel / **700,318** USD for employees. Thus, in the 2nd phase of the programme the ALCP created **16,332,524** Gel / **8,346,881** USD additional attributable income, which is **30%** more than the benefits generated in the first phase (Alliances KK).

Proxy indicators[10]

In addition, proxy indicators also show that those who used the ALCP financed services had better economic situation, then those who did not used the services. For instance, **40%** of the households have credits / debts, however only **10%** from the beneficiary creditors had serious problems with loan repayment (Delay more than one week), while same figure with for non-beneficiary creditors is **24%**. Also, the beneficiary households have better purchasing power and during 2014 to 2016 they bought more items than non-beneficiaries. Within the beneficiary group, an additional **619** households brought a house, **2,888** households – a new car, **5,033** households - a refrigerator, **1,988** households – a computer, **4,009** households – a mobile phone and **1,805** households – new furniture (See table 8).

Table 8: Items brought by rural households after 2014
% by beneficiary and non-beneficiary groups



[10] This section was added because of the recommendations from the Outcome Harvesting research in Tsalka, which outlined the importance of closely monitoring lending patterns, household debt, default rates and house prices & farmers purchasing power of it.

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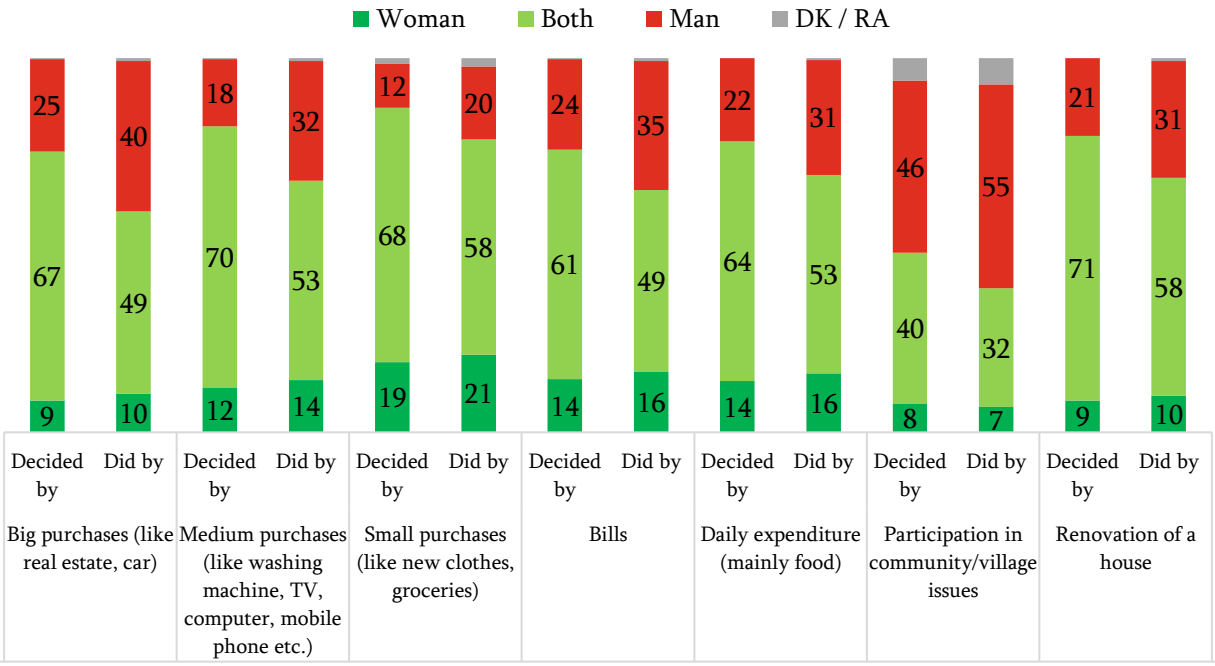
In **56%** of the households women manage the household budget independently (15%) or together with other households members (41%). Furthermore, in **75%** of the households women are involved in decision making process regarding the household's purchases and in **63%** of the households women do buy the items / services independently or together with other households members (See table 9).

Table 9: Table 5: Usage and Decision Making Relevant to the Services by Gender (% out of whole sample)



2.3 SUSTAINABILITY OF THE RESULTS

Business profitability -The aggregated NAIC/profit for the programme clients comprises **4,069,675** Gel / **2,244,339** USD. But the return on investment, profitability of the businesses and forecasts vary from sector to sector. Table 7 below displays the profitability and returns on the investments generated by the service providers:

Table 11: Description of the Effectiveness of Interventions for Each Sector

		Veterinary	Breeding	Nutrition	Machinery	Meat sector	Dairy sector	Wool
By the end of the project	Clients' ROI - to date	191%	150%	105%	373%	-58%	35%	-1%
	Sustainability index[11]	98%	39%	72%	80%	79%	92%	62%

[11] Where 1% means non sustainable at all and 100% means absolutely sustainable. For further details, please see annex C.

Business model Replicability (Systemic Changes) - ***Crowding In***: **25**[12] entities have copied the intervention model or part of the intervention model and have entered the market system at the service provider level. In total, crowding in entities are reaching up to **67,088** farming HH's and resulted in **2,385,448** Gel / **1,293,812** USD NAIC for farmers.

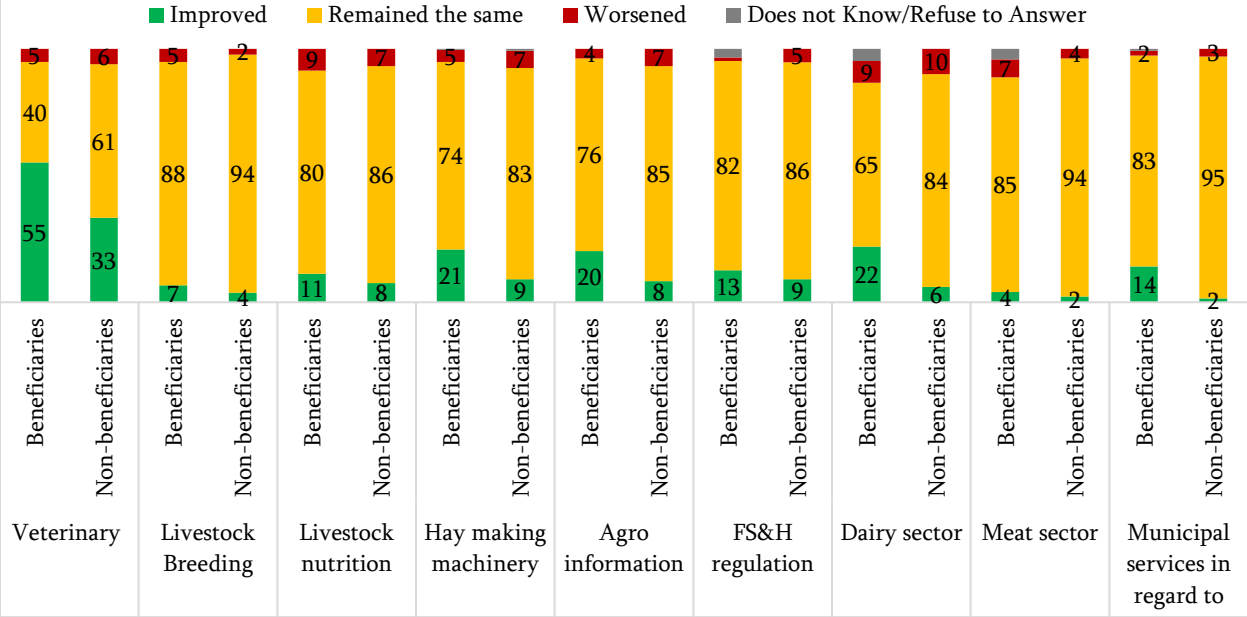
Changes in the amount of money invested in livestock sector and in a number of animals possessed by farmers – The economic fluctuation was reflected in low investment in agriculture. In 2016 only 13% of the farmers mentioned that they made investment in agriculture. Also, Farmers did not increase either the number of cattle or amount of land they cultivated. However, the ALCP beneficiaries managed to maintain their assets, while non-beneficiary group witnessed a significant decrease in agricultural production. The beneficiary group had the same amount of cows (On average 3.6) in 2016 as they had in 2014, however the non-beneficiary group reduced number of cows from 3.1 to 2.3. The same is true regarding the amount of land cultivated for hay making. (See table 12 & 13)

Table 12 *(Average out of the total sample)*	2016		2014		Difference (2014 to 2016)	
	Beneficiaries	Non-Beneficiaries	Beneficiaries	Non-Beneficiaries	Beneficiaries	Non-Beneficiaries
Cow	3.6	2.3	3.6	3.1	.0	-.7
Bulls	.3	.1	.3	.2	.0	.0
Calves (bullocks and heifers)	2.4	1.4	2.3	1.4	.1	.1
Sheep	11.2	3.2	4.5	4.3	6.7	-1.1
Goat	.0	.3	.0	.3	.0	.0
Bee colonies	.5	.4	.4	.7	.0	-.3
Table 13	2016		2014		Difference (2014 to 2016)	
	Beneficiaries	Non-Beneficiaries	Beneficiaries	Non-Beneficiaries	Beneficiaries	Non-Beneficiaries
Amount of land cultivated for hay making	1.4	.6	1.4	.7	.0	-.1

In General, beneficiary farmers expressed more positive attitudes toward the development of the agriculture spheres than non-beneficiaries did. In the beneficiary group **22%** more farmers think that veterinary sector improved, **16%** thinks the same about dairy, **12%** - about hay making machineries and agro information (See table 14) over non benificiaries.

[12] In total (2011 to 2016) 45 entities crowding in: 8 vet pharmacies, one bull owner, 18 nutrition suppliers / shops, 5 agro information channels, 4 machinery shops, 3 cheese factories, 3 slaughterhouses, one in FS&H, 2 in Business development services, one DRR and one women's room.

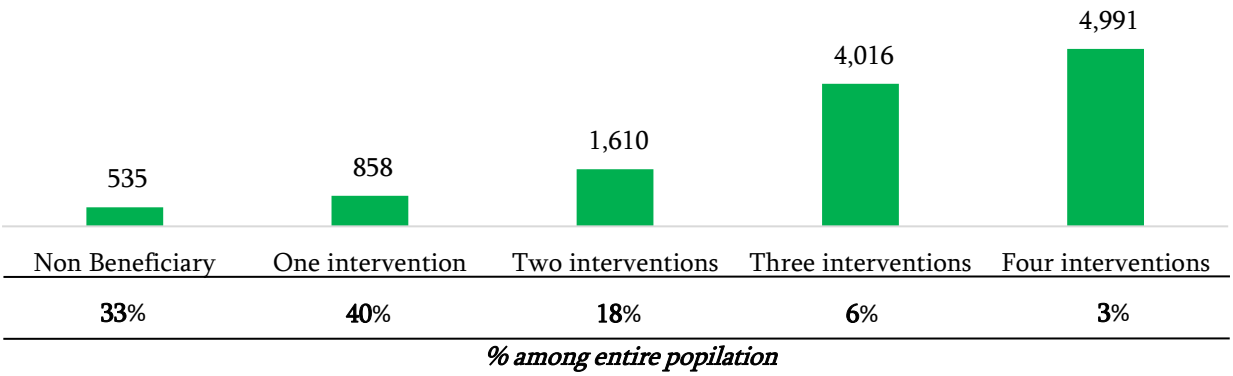
Table 14: Farmers attitudes towards the changes in the following agriculture sphares from 2011 to 2016
By beneficiaries and Non-beneficiaries group (%)



2.4 The Effect of the Systemic Approach

The structure of the programme is built in a way to generate poverty alleviation as the result of market-system changes brought through three different systemic channels, each impacting and contributing to the programme goal differently, and the synergy of these outcomes reinforces the effects of each intervention. Interventions in Kvemo Kartli were intentionally clustered to produce synergy, i.e. supporting functions i.e. inputs; veterinary, breeding, nutrition, and information were made available to villages supplying milk to a factory as were governance related activities. The data shows that using programme facilitated services are correlated with higher income from agriculture. Also, this correlation is linear and proves the success of the ALCP interventions: The more services farmers use, the more income they generate (See table 15).

Table 15: Average annual additional income of the HH from livestock related activities
by number of intervention used (Gel)



SECTION 3: PROGRAMME ACHIEVEMENTS TOWARDS OUTCOMES – OUTCOME 1

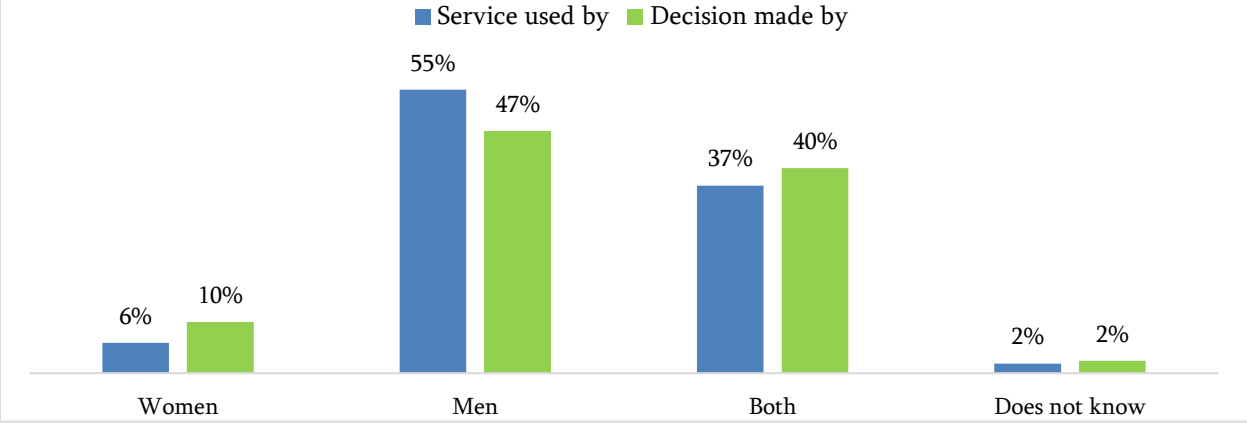
3.1 OUTCOME 1: *Increased outreach, information dissemination and quality of target services to SSLP's; increasing access and enabling SSLP's to make informed decisions on animal health, breeding and nutrition*

Outcome 1 has addressed the main constraints in supporting functions to the livestock sector (veterinary, breeding, nutrition, information and access to finance); which forms the constraints to the delivery of services and inputs to core market players for cattle, meat and dairy production.

Outcome 1 reached the largest scale. It covered 66% of the target households and overlapped 98%[13] of Outcome 2 / Outcome 3 beneficiaries.

In 43% of the households women and men use Outcome 1 services together and decisions over use of the services are made jointly in half of the households. However, in terms of using services alone in the HH such instances are less common for women than for men. For further details, see the table 16 below:

Table 16: Usage and Decision Making Relevant to the Services by Gender (% out of the outcome 1 beneficiaries)



3.2 OUTPUT 1 1: *Facilitated improvements to business practices and outreach of animal health service & input providers to access wider SSLP markets with affordable, appropriate and quality products*

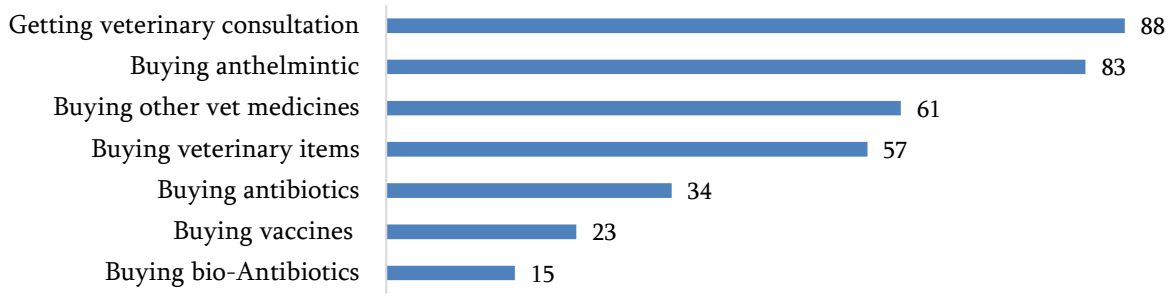
The programme facilitated one systemic market intervention with national veterinary input supplier and exporter ROKI and in Kvemo Kartli supported 20 local vet pharmacies. In the region, where practically no professional vet services were available before, 100% of farmers have access to the programme facilitated services within their communities and 52% (32,020 HHs) of the target households use the services.[14]

Farmers get a variety of services in the vet pharmacies: In 2016 most often customers visited vet pharmacies for veterinary consultation services (88%), for anthelmintic (83%) and for veterinary items (57%) (See table 17).

[13] 98% of those who used outcome 2 /3 services, also used outcome 1 service as well.

[14] Also, approximately 400,000 farmers have used Roki vet pharmacies outside the programme area generating estimated 11,500,000 Gel / 4,900,000 USD NAIC. Also, Roki exported 1,000,000 Gel / 430,000 USD worth of vet medicines in Azerbaijan and Ukraine.

Table 17: Vet pharmacies' services used by farmers in 2016 (%)



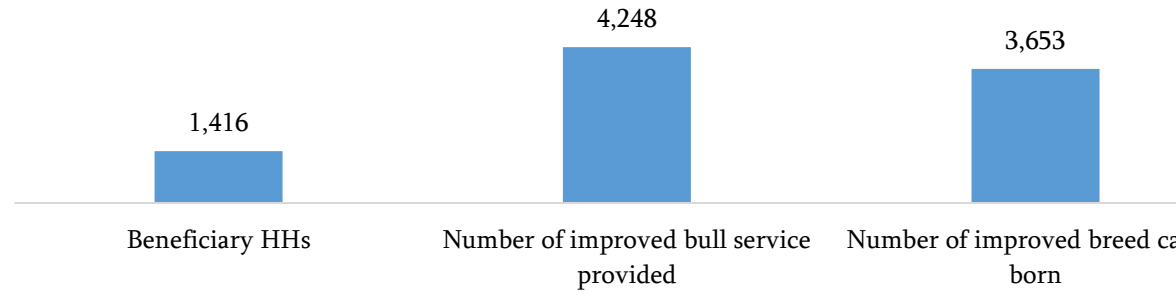
In 43% of the households the vet service is used by women independently or together with other household members. Farmers positively evaluate the vet pharmacies and 94% of them mentioned that they will use the service in future as well. Among the reasons of choosing the programme facilitated service, farmers most often mentioned that these vet pharmacies are near (39%), they have better service / consultation (19%) and quality of the vet medicines are higher (12%).

The easily available vet pharmacies reflected on increased demand on the service. On average one household visits a vet pharmacy 10 times a year and in the case of need half of them have contact information of the vets and they can call them. Also, 50% of farmers vaccinate their cattle as well as the governmental vaccination programme.

3.3 OUTPUT 12: *Facilitated improvements to business practices and outreach of livestock breeding service providers to access wider SSLP markets with affordable & appropriate products*

The programme started replacing local bulls with improved ones through providing co-investment in the purchase of improved bulls. The 44 improved bull owners sent the bulls to a community herd and thus facilitated other farmers' access to the improved bull service.
2% (1,416 HHs) of farmers in the region used the service, however the actual impact of the intervention is higher when we look the number of improved breed calves born: On average one household inseminated 3 cows, which means that improved bulls inseminated around 4,248 cows and as the result of it 3,653 calves were born (See table 18).

Table 18: The impact of the bull replacement intervention



The programme conducted an experiment to study the benefits of the improved breed calves. Compared to the local breed cattle, improved ones have better liveweight and milk yield. In particular, improved breed calves weight 16 kg more right after the birth and this difference increases to 63 kg

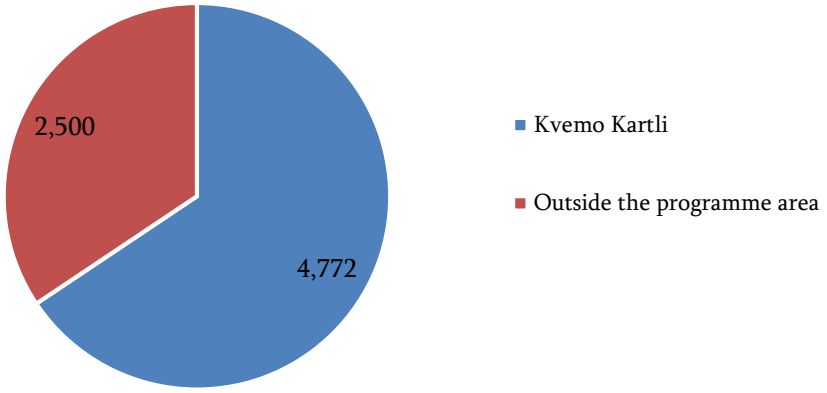
after 18 months. Also, the improved breed cows' milk 4 liters more than the local breed ones. So, the benefits of the improved breed cattle are obvious: All of the users of the service reported that they are going to use the service in future and also, they will suggest others to use the service as well. however, some of the farmers still have skeptical attitudes regarding it. Among the reasons for not using the service 74% of the non-beneficiary groups mentioned that they do not need the service.

Breeding is predominantly a male dominated sphere and only in 15% of the households women use the service together or with other household members.

3.4 OUTPUT 13: *Facilitated improvements to business practices and outreach of nutritional input & service providers to access wider SSLP markets with affordable & appropriate products*

The programme facilitated an intervention with individual entrepreneur Ednari Antadze to improve farmers' access to brewers' grains, combined feed and hay. There is a general trend that year after year more and more farmers (33%) are now using improved nutrition to feed their cattle. In Kvemo Kartli region 8% (4,772) of the target rural households use improved nutrition purchased from Ednari Antadze's, out of whom 42% were women. 38% of the client's sales comes outside the programme area, where an estimated 2,500 farmers used the service. Thus, in total the client served around 7,234 rural households (See table 19).

Table 19: Number of beneficiaries by regions



The most demanded nutrition is combined feed and 75% of the users buy it on a regular basis: 5% use it all year and 70% use it in winter. Most of the farmers (95%) use improved nutrition to feed only milking cows only 5% use it for calves.

The feed significantly increases milk yield and live weight of cattle. According to the ALCP experiment, by using a bag of combined feed (20 kg) milk yield increases by 15 liters and live weight by 1 kg. During the impact assessment interviews, farmers found it difficult to estimate the increased productivity by themselves, but they positively evaluated the service: All of them reported that they were going to buy these products in future as well.

3.5 OUTPUT 14 *Facilitated improvements to access of SSLPs to appropriate information on agricultural practices, market prices, DRR and local self-government*

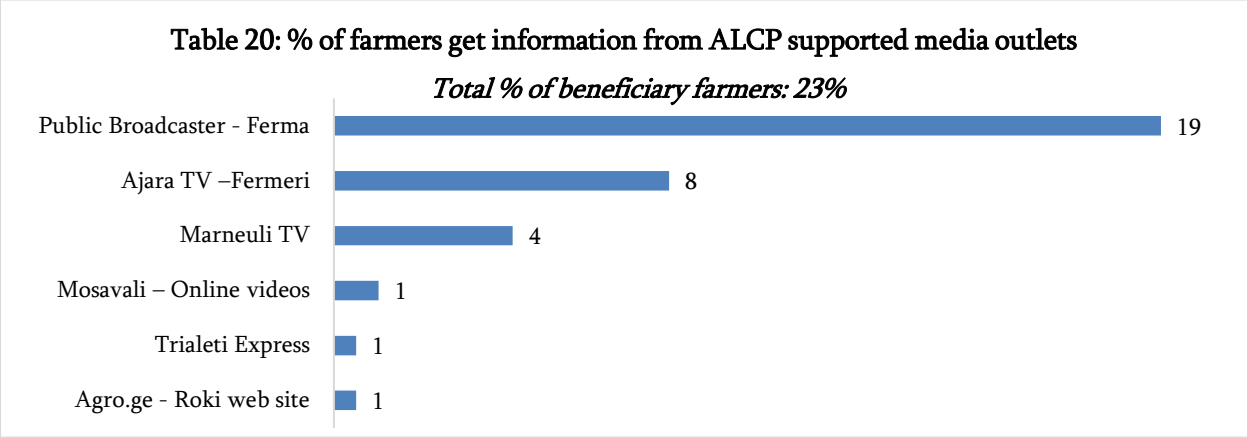
The programme has facilitated three information channels by the end of the project. All of them: local newspaper 'Trialetis Expresi', local TV Marneuli and TV programme "Chveni Ferma" are mature

enough to have an impact on farmers. In Kvemo Kartli prior to the intervention there was no informational channel with agricultural content available for farmers.

In rural households the main source of information regarding agriculture is TV (41%), and family members / friend (16%). Online media is very popular among the urban population and more than 50,000 people watch agro videos on YouTube and Facebook[15]. However currently only 1% of rural households get agro information from online media, however it is highly expected that, this number will be increased, because the demand for internet services increases per year: From 2011 to 2016 the number of rural household with internet access doubled (From 15% to 29%).

So far, in Kvemo Kartli 23% (14,316 HHs) of the target households get agro information from ALCP supported entities[16]. The majority of farmers watch the Agro programme 'Ferma' on the Public broadcaster and 'Fermeri' on Adjara TV (See table 20).

Table 20: % of farmers get information from ALCP supported media outlets



In 72% of beneficiary households women read / watch agricultural information independently or together with other household members. On average, 2.1 people watch / read agro information per household and they share new information with 1.5 person outside the family as well. As the result, 15% of the beneficiaries adapted new practices and majority of them find these new practices beneficial for their production.

Still, ethnic minorities have limited access to the agro information 26% of the households do not watch / read the ALCP supported agro information because of the language barrier. However, this issue is already being addressed by the ALCP clients and soon the agricultural programmes will be translated in Azeri and Armenian languages.

3.6 OUTPUT 1.5 *Facilitated improvements to access to financial services for Dairy & Meat value-chain SMEs & SSLPs*

The programme has facilitated one machinery input supplier to import different types of equipment for hay processing from various countries by offering variety of products with different prices at wholesale rates. The company adopted the programme facilitated interest free subsidy model for

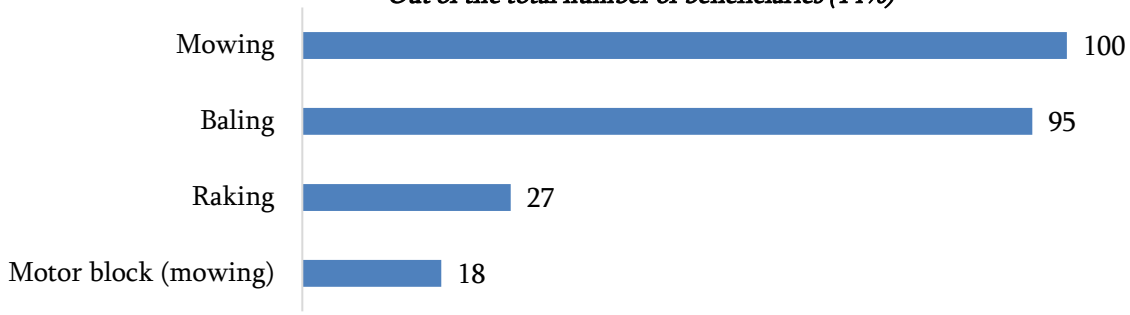
[15] This data comes from the ALCP clients.
[16] Also, the programme supported agro information covers other regions of Georgia as well: Estimated number of beneficiaries outside the programme area is approximately 160,000 households.

machinery service providers and farmers buying implements for hay making. Based on its success, in 2015 they started working with financial institutions to provide interest free loans to customers on all agricultural machinery. The financial institutions Credo and Bank Republic agreed to reduce their 8% base interest rate to 5% which is covered by the company, meaning the loan is interest free for the customers.[17] So far, 211 machinery operators co-financed by the programme to buy the hay making implements.

Most of the machinery operators started working in summer 2016 and it is already clear that the intervention has significantly increased access to machinery services within the entire rural population: 14% (8,620 HHs) of the rural households used at least one of the machinery services. Among the beneficiaries, the most frequently used machinery services are mowers (100%) and balers (95%) (See table 21).

Tabkle 21: % of machinery beneficiaries by type of the service

Out of the total number of beneficiaries (14%)



Hay making is predominantly a male dominated sphere: In 14% of the households women use the service together with other household members as well. The farmers mentioned that they saved time by using the machinery services and it produced higher quality hay with lower loses. Correspondingly, 95% of beneficiary farmers mentioned that they would use the same service in future as well.

SECTION 4: PROGRAMME ACHIEVEMENTS TOWARDS OUTCOMES – OUTCOME 2

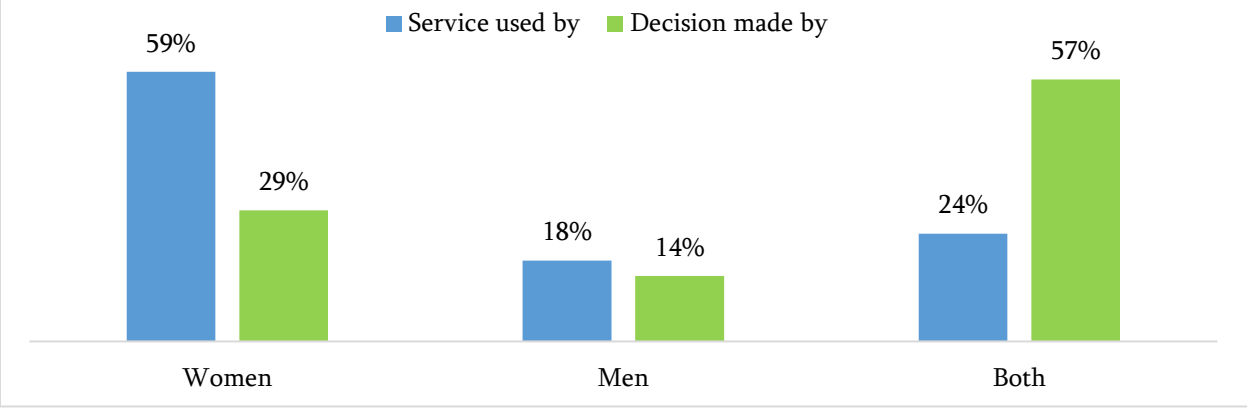
4.1 OUTCOME 2: *Market Access & Terms of Trade are made more advantageous for small-scale livestock producers*

Outcome 2 developed access to the **Core Market** for milk, meat and wool suppliers and worked with cross-cutting rules related to food-safety and hygiene.

From 2014 to 2016 Outcome 2 covered 15% (9,235) of the target households. This outcome includes female dominated interventions (e.g. dairy is predominantly a female dominated sphere): On average, in 83% of the households women are engaged in the process of selling the agricultural products independently or together with other households member. Though, decisions over use of the services are made jointly (See table 22).

[17] However, this impact could not capture through this impact assessment.

Table 22: Usage and Decision Making Relevant to the Services by Gender (% out of the outcome 2 beneficiaries)



Compared to the outcome 1, outcome 2 has lower scale but it is the core market for generating net additional income for farmers. We cannot disaggregate NAIC per outcome[18], however the data shows that almost everyone (93%) who used outcome 2 interventions generated additional income .

4.2 OUTPUT 2 1: *Increased awareness & adherence of value-chain actors to food-safety, hygiene and management standards and best practices facilitated*

ALCP has established a new player for regional Food Safety and Hygiene, Star Consulting Company to increase and improve awareness of the cheese factories in Food Safety and Hygiene through capacity building trainings (with factories and Farmers), later these entities trained the raw milk supplier women on Milking procedures and other FS and H topics. Also information on Food Safety requirements are spread through Newspapers, Media and Brochures / Leaflets.

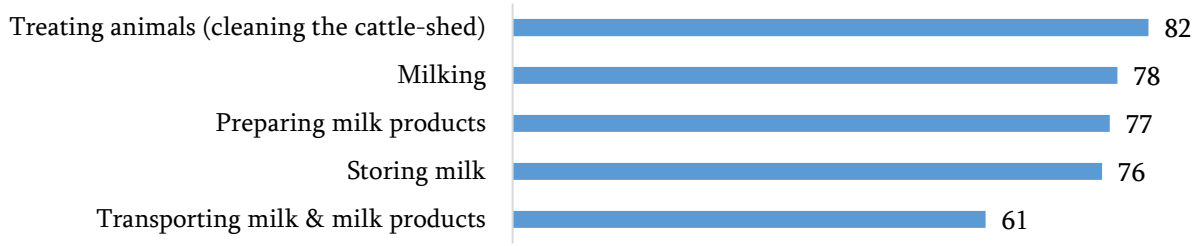
The majority (59%) of the farmers are aware of the new food safety and hygiene regulations, out of whom 18% (6,465 HHs) got information from the ALCP supported interventions: 4% (1,385 HHs) from the trainings & from cheese factories and 14% (5,080 HHs) from the ALCP supported media outlets.

The intervention is mainly targeting women, as they are mostly responsible for daily milking process and they take care of cattle. Therefore, the majority (78%) of those with increased awareness of standards are women.

Most of the farmers feel confident regarding the FS&H standards and 55% of the farmers mentioned that it is easy to follow new regulations. Furthermore, on average 75% of those who know about the standards, use this information while they are treating cattle, milking cows, storing the milk, preparing the dairy products and transporting milk or cheese (See table 23).

[18] Because of the huge overlap rate: 98% of outcome 2 beneficiaries used outcome 1 interventions as well.

Table 23: Farmers use the information about the FS&H while they are (% from those who knows about the FS&H standards)



Also, the ALCP financed the National Food Agency to register farmers' cattle into a data base. So, far 94% of the rural household have already been registered.

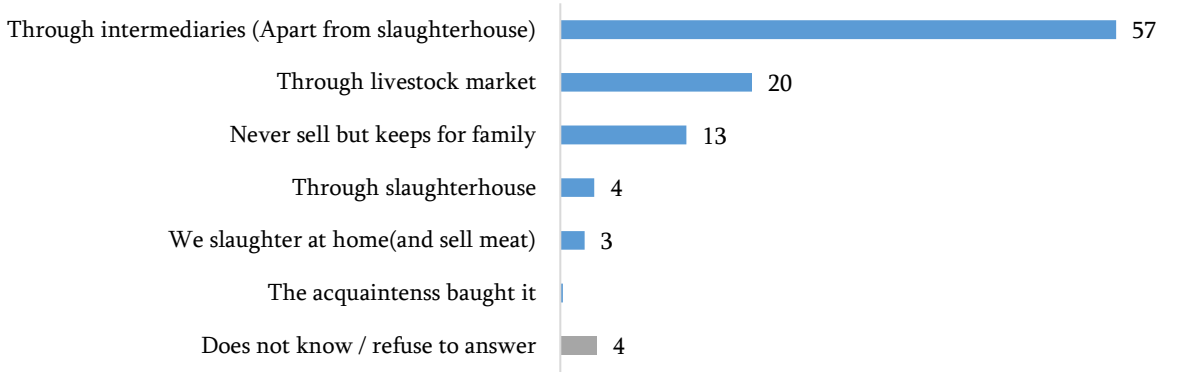
Still, there is big room for development as well, because 63% of the farmers reported that they want to have additional information about FS&H.

4.3 OUTPUT 2 2: *Increased volume and value of trade and efficient and cost-effective access to meat products for intermediaries and processors from SSLPs facilitated – Meat Sector*

The Meat market is one of the most important and difficult to measure in terms of impact. Farmers generally sell their animals to intermediaries, who are the interface to the slaughterhouse, with whom the programme works. Therefore, farmers impact assessment peaks up only some of the interaction, as farmers often do not know, which slaughterhouse intermediaries are using. Compliant slaughterhouses strengthen the market through generating regular market for the selling of cattle, save time and have access to cash. Besides, it enables the beneficiaries to translate into monetary terms the benefits generated from other interventions like improved nutrition and breeding services. The programme financed three slaughterhouses in Kvemo Kartli region.

4% (2,155 HHs) of the target households reported that they used the programme facilitated slaughterhouses directly. Apart from that, 57% of the farmers mentioned that they sell their cattle through intermediaries, but could not specify whether they were slaughterhouse intermediaries or from the livestock market (See table 24).

Table 24: The ways farmers are sell / slaughter their livestock (%)



However programme qualitative surveys have shown that slaughterhouse intermediaries have better services, prices and more reliable weighing scales (i.e. farmers are being paid for actual weight not estimation) as well. The farmers complained that other (i.e. from non-facilitated entities), intermediaries estimate the weight of the cattle by sighting (visual observation) and they were cheating the actual weight. The ALCP supported slaughterhouses have exact scale and the impact assessment data proves that farmers are more satisfied with it. All of the beneficiaries said that they would use the service in future and they also reported that they trust slaughterhouse intermediaries more than any other buyers. Thus, the actual scale of the ALCP supported slaughterhouses is therefore highly likely to be higher, than 4%[19].

On average in 34% of the households women use the slaughterhouse service, however the most important thing is that all of the slaughterhouse beneficiaries (Men / Women) reported that within the household women manage the money generated by selling cattle.

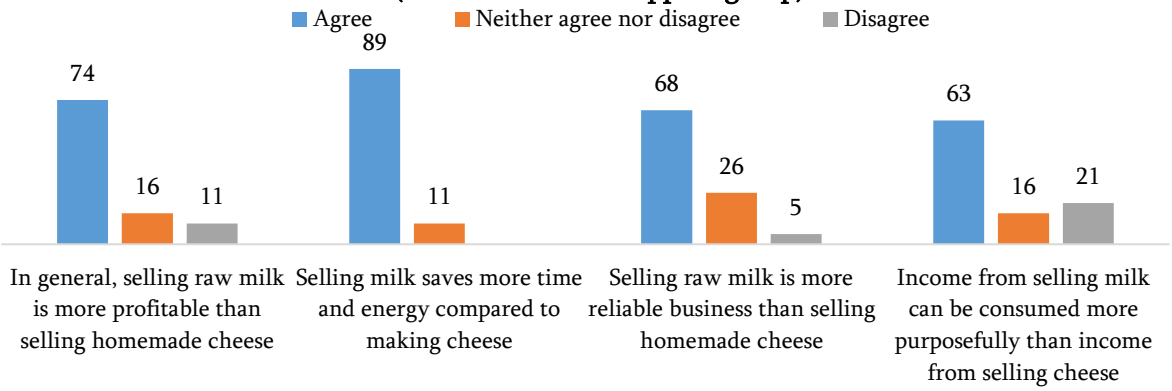
4.4 OUTPUT 2 2: *Increased volume and value of trade and efficient and cost-effective access to dairy products for intermediaries and processors from SSLPs facilitated – Dairy Sector*

The dairy market is one of the most important fields of programme impact. The dairy interventions allow farmers to sell raw milk on daily basis, save time and have access to cash. Besides, it enables the beneficiaries to translate into monetary terms the benefits generated from other interventions like improved nutrition, breeding services and food safety and hygiene. But the key about the intervention is that, it supports farmers with limited access to money – i.e. to farmers in remote villages where informal economy and barter exchange is more common than cash exchange to have access to cash on a regular, daily basis. In most cases milk processors offer an option of advance payment to farmers, in exchange for their loyalty. They sign agreements with farmers and pay money beforehand for a certain amount of milk. This makes life easier for both sides: Farmers get the possibility to use money for improving their agriculture and milk processors have regular milk suppliers.

The programme has financially assisted and provided consultancies (business consultancy, FS& Hygiene and BEAT) to 10 local milk processors. Currently, 9 of them are working and show the resilience to market fluctuations. The ALCP supported milk processors work all year round, so milk suppliers have regular access to the service. 18% of farmers have access to these milk processors and 11% (6,751 HHs) used the service. Those who do not use the milk processors still prefer to sell milk products. However, those who sold raw milk to milk processors saw the benefits of it: 79% of suppliers reported that they are continue to use the service in the future as well. Farmers said that compared to selling homemade cheese, selling raw milk is more profitable and reliable business and income from it can be consumed more purposefully (See table 25)

[19] For this reason the programme plans additional quantitative survey to measure actual scale of the slaughterhouses.

Table 25: Farmers' evaluation of the benefits of selling raw milk (% out of the milk supplier group)



Also, on the question, "What percent of milk did you use at home and what percent of milk did you sell", milk suppliers mentioned that they sold approximately 87% of the raw milk in 2016, while this number in 2014 was only 58%.

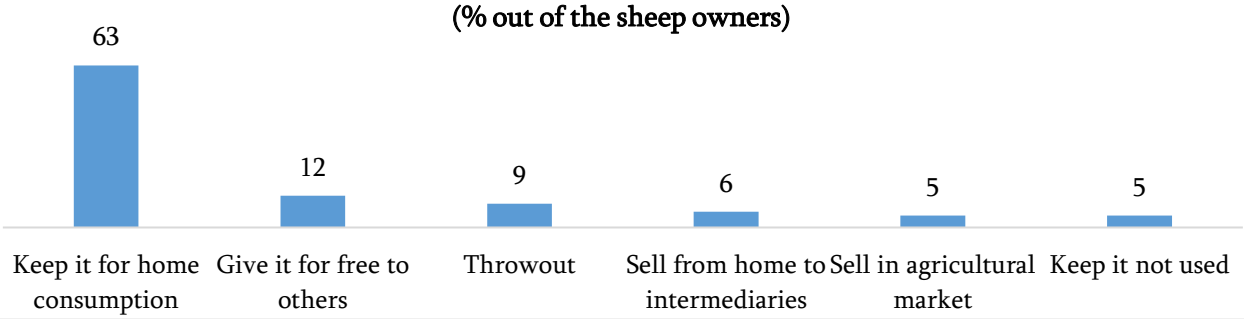
The milk processors contribute to the women's economic empowerment as well. All of the milk suppliers are women and in 89% of the households women are controlling the money (Independently or together with other HH members) generated by selling raw milk.

4.4 OUTPUT 2 2: *Increased volume and value of trade and efficient and cost-effective access to wool products for intermediaries and processors from SSLPs facilitated – Wool section*

The wool sector is being rebuilt by the programme as the sector collapsed after the Soviet Union. The programme has been working on the collection of wool from famers to sell it in the domestic and international market and it is growing monthly. The export of wool is increasing and opens new opportunities for farmers to profit from the sale of wool. Wool is often thrown away or burned when there is no market.

The impact assessment showed that 16% of the households have sheep and from 2014 to 2016 they increased the number of sheep from 31 to 45 sheep per household. However, farmers usually use wool for home consumption or even throw it away (See table 26). Only 11% of the sheep owners sell it. The two ALCP supported businesses collect wool outside of the programme area in Kakheti as well as inside it, however they served 616 households in Kvemo Kartli.

Table 26: Farmers use the wool (% out of the sheep owners)



It seems that only those farmers sell wool who own more than 200 sheep: In 2016 the average amount of wool sold by one household amounted 609 kg and this figure doubled after 2014. Those farmers who have fewer sheep reported that they need wool for home consumption or they believe that the amount of wool they have is not enough for selling. The impact assessment shows that there is significantly more supply than is currently being tapped and that this supply will have to include farmers with smaller numbers of sheep.

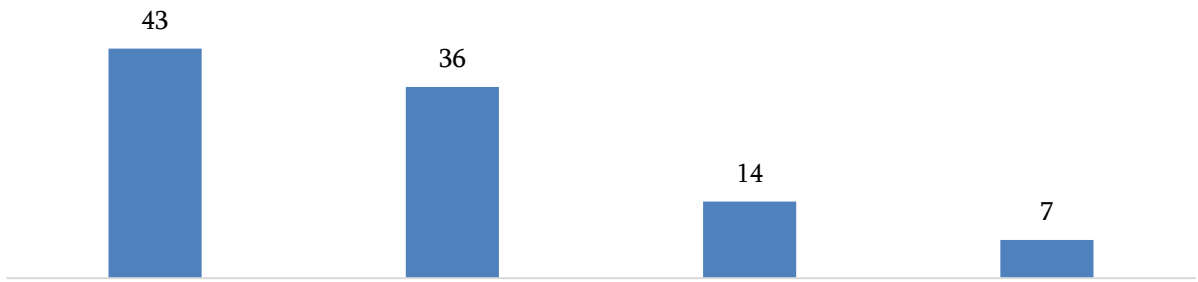
SECTION 5: PROGRAMME ACHIEVEMENTS TOWARDS OUTCOMES – OUTCOME 3

5.1 GENDER OVERT INTERVENTION: WOMEN ACCESS TO DECISIONS MAKING[20]

In 2011 a pilot project, a new municipal service Women's Room, was started in Tsalka, Dmanisi and Tetritskaro Municipalities aiming to grant access to women to public goods in local government, to pensions, consultation, benefits and to make them feel welcome in the government building. Five years on in Kvemo Kartli there is a Women's Room in each municipality. The ALCP also trained village representatives and advocated to for women's involvement in the decision making process on the community level.

So far, in Kvemo Kartli 4% (2,155) of the rural households used the WR service. Women and men have equal (50% / 50%) access to the service. The farmers get information about the Women's Rooms from local representatives (86%) and family members / friend (14%). On average one beneficiary uses the Women's Rooms 4 times a year and most frequently they get consultation service (43%) and attending trainings (36%) (See table 27). In addition, 41% of the farmers in KK know about the community meetings and 11% actually attended it in 2016. In terms of women's access to decision making: in 2012 only 3% of women used to attend community meetings, while in 2016 33% of the meeting participants were women, out of whom 43% of them initiated their own idea at the village meetings.

Table 27: Most frequently used services in the Women's Rooms (%)



The visitors positively evaluate the Women's Room's service and 86% of the beneficiaries reported that they would continue to use it in the future as well. Also, they expressed willingness to attend trainings or get consultation regarding project writing (57%), vocational education (29%) and business management (7%).

[20] The rest of the Outcome 3 interventions where not examined during the survey

ANNEX A: SURVEY & DATA COLLECTION PROCESS

The programme conducted a household survey in October 2016, in programme target area.
The programme has conducted the survey with help of local research organization Tbilisi Economic and Statistics Institution (TESI). The deliverables of TESI included:

- Translating the questionnaire into Russian and Azeri;
- Sampling;
- Requiting and partially training of the interviewers;
- Conducting and supervising of the interviews;
- Construction of the database, entering the data, cleaning the data base and providing the ready database;
- Ensuring the quality checks of the interviews, data entry and data cleaning process – as well providing report on these tasks;

Sampling Framework:	The sample framework for ALCP project is the list of voters from the electoral committee of 2015. • ***Sample size:*** 400 face-to-face interviews; • ***Sampling strategy:*** Multi Stage Cluster Sampling (MSCS) with preliminary stratification • ***Methodology to identifying respondents:*** Random walking - for identifying the households. The households are filtered, leaving out the families not leading the animal husbandry. Within the family most informed adult person (18+) in regard to animal husbandry is interviewed.
Rationale:	• ***Representative sampling*** If the population is large it becomes difficult and expensive to identify each sampling unit. In such cases the use of cluster sampling is more appropriate. Cluster sampling is based on the idea to divide the sampling population into clusters, and then to select elements within each cluster, using the SRS technique. In this case we do keep the possibility of each unites to be selected within the sample. In ALCP Clusters were formed on the basis of geographical proximity. Overall sample size was distributed between districts of Kvemo Kartli in proportion to population with 18 and more age. Each district was divided in clusters according to the size of rural settlement. At the second stage, Primary Sampling Units (PSUs) – in this case villages - were sampled. The sampling strategy requires maximizing number of clusters and minimizing number of elements within cluster. Number of PSU's which should be selected in each strata will be

	defined by dividing number of interviews in these strata on 10. In each PSU 8-12 interviews were conducted. PSU's will be selected by using Probability Proportional to Size (PPS) method. On the third stage *Secondary Sampling Unit*s (SSUs) were designed which is household. In each selected PSU SSU's were selected by random walking method using step between households. *Final Sampling Unit* (FSU) was individual with 18 and more age, being informed about the issues of husbandry. Standard error for 90% confidence interval is 4.2%, which is permissible for regional studies.

VI. List of geographic locations covered by the assessment

Within the ALCP project all districts of Kvemo Kartli region were covered.

VII. Key Research Tools: [e.g. Sample Survey and etc.]:

- Sample Survey,
- Structured questionnaire in Armenian, Russian and Georgian
- Cards for respondents.

VIII. Data Gathering and Quality Control:

- *Designing the questionnaire*

For designing questionnaire, the questionnaire of Impact Assessment Survey in Kvemo Kartli region (2016) will be used.

- *Training for interviewers*

After finalizing the questionnaire and designing the survey sample, the interviewers will intensively be trained by supervisor and project coordinator, considering the general rules of interviewing process and sampling and specificity of the questionnaire, the protocol of the study, their responsibilities and types of sample.

- *Roles and responsibilities*

Interviewers were the local researchers, who cooperate with TESI for long time. In ALCP study there were three other people included: **Analyst**, who participates in the process of finalizing questionnaire and defining the sample design and cooperates with Mercy Corps for main issues. **Project director**, who is responsible for organizational and financial issues. **Supervisor**, who did the pre-test of research instrument, was included in the finalization process of the questionnaire. She works in Kvemo Kartli region for long time and she is responsible for recruiting and supervising the local interviewers.

- *Dates for the field work*

01.10.2016-30.10.2016[21]

- *The quality of the information gathering*

The quality of data gathering is ensured by the supervising process of the interviewers during fieldwork which is done by TESI supervisor, as well as the representatives of Mercy Corps. Furthermore, directly after the fieldwork TESI started field work quality control. TESI project coordinator trained an independent interviewer who is responsible for field control. It is exclusively her function, never mixing up with basic initial field-works.

For ALCP project 38 interviews went under the field control. Questionnaires that were checked had been selected randomly from the package of filled questionnaires, though the packages themselves were systemized in a way that almost every interviewer were back checked.

Field controller was trained according to the general and specific requirements of survey. She was aware what kind of errors had to be fixed and reported to the coordinator of the survey. The field work quality control did not expose serious problems that would cause the replacement of the interview.

- *The tendency of respondents to give 'desirable answers'*

Within the face-to-face interviews it is impossible to overcome the desirable answers as well as the influence of interviews completely. The desirable answers were avoided by the natural character of the questions within the questionnaire, by the natural manner of asking them to respondents, by the 'probing methods' used by the interviewers and by the controlling questions.

IX. Data Processing and Analysis:

- *Data entering*

During the fieldwork the statisticians of TESI develops an SPSS database, based on the questionnaire. Simultaneously the fieldwork (when approximately 50% of questionnaires are filled out) the data entry procedures starts. The semi-closed questions are coded and inserted into the SPSS data framework.

The technical assistant of TESI is responsible for coding and putting data into SPSS program. SPSS programme specialists (statisticians) cleans and processes the data.

For ensuring the quality of the data entry the random checking (comparing the database with the questionnaire) is done by SPSS specialist (statistician). Furthermore, the data checking encompasses three sub-processes:

- ✓ Data checking and error detection;
- ✓ Data validation;
- ✓ Error correction.

[21] Additional 2 weeks were needed for data entry and 2 weeks for cleaning & recoding and writing report.

Survey data is processed and analyzed through SPSS programme, on the basis of different descriptive methods: distribution of frequencies, cross-tabulations.

B.6 Possible Limitations

The method has following limitations:

- Representativeness - the sample is representative for the programme area, but it cannot claim to show the statistical significant differences for sub clusters.
- Need of qualitative information for deeper explanation – Some of the finding might need to be explained through the qualitative information. For example, the relationship between income and number of intervention used. For deeper analysis further qualitative researches is needed.
- Recall bias – respondents were asked to recall information retrospectively, however most of the data is triangulated and recall bias is minimalized.

B.7 The Key areas of the impact assessment research

The key aims of the analyses are:

- To report on changes attributable to the programme: Through the difference[22] in changes across affected and non-affected populations in 2016.
- To evaluate costs and benefits or the value for money: Through the attributable changes in target households and the programme clients' incomes and the aggregated social return on the programme investment.
- To assess the sustainability of the changes: Through the profitability of the business models, the business return on the private sector investment, systemic changes i.e. copying and crowding in and programme attributable changes in the rate of reinvestment in agriculture by farmers.
- To assess the synergistic effect of the systemic approach: Through capturing the effect of the synergy of different interventions and outcomes.

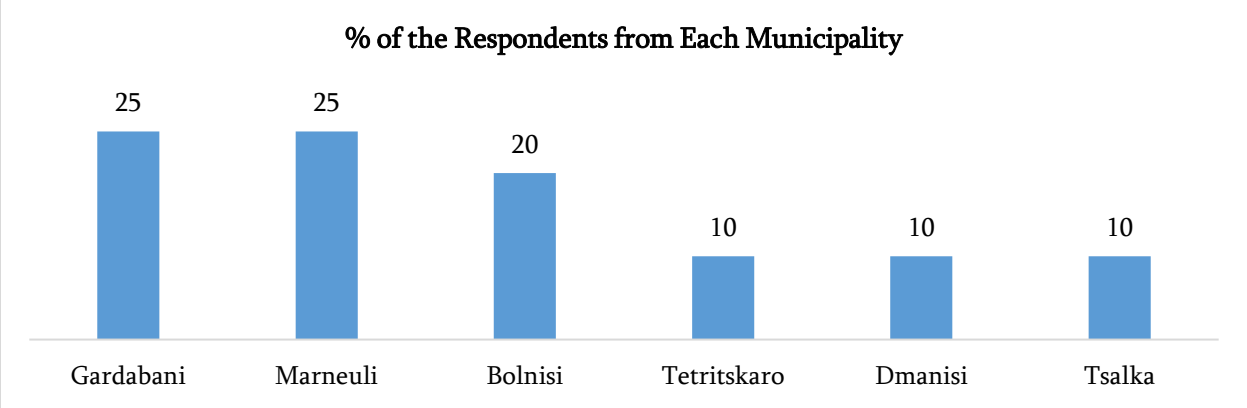
	Indicator	Definition
Outreach and scale	Availability of the intervention (available within the community)	# of communities covered by the intervention
	Access to the intervention	# of farming households with awareness and access to the intervention is within their or neighboring communities
	Usage of the services	# of faming households using the programme facilitated services.
	# of beneficiary households	# of faming households using the programme facilitated services, and generating positive income changes
Value for money – Farmers Benefits	Employment created	Number of full time job places generated by the programme clients due to the interventions
	Net (programme) attributable income changes NAIC for target beneficiaries	NAIC for target beneficiaries= Beneficiaries Agro - Income 2016 - Beneficiaries Agro - Income 2014 - (Non Beneficiaries Agro - Income 2016 – Non Beneficiaries Agro - Income 2014) – inflation
	Aggregated social return on investment (SROI)	Farmers aggregated NAIC minus and over programme investment
Sustainability *(business/financial sustainability)*	Profitability of the businesses: Client's ROI	Clients NAIC minus and over clients investment
	Replicability of the business models	Number of copying and crowding in

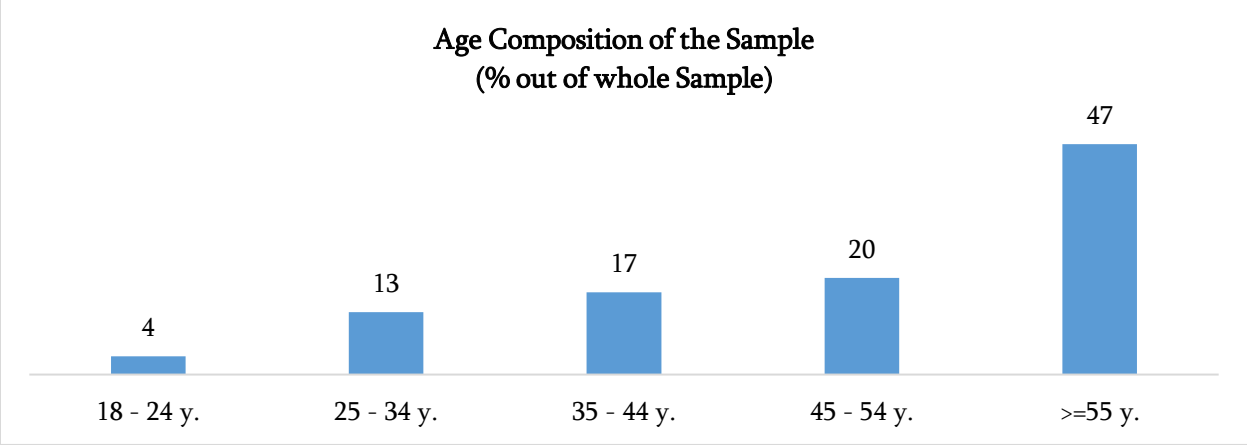
[22] Or negative like displacement in case they occur.

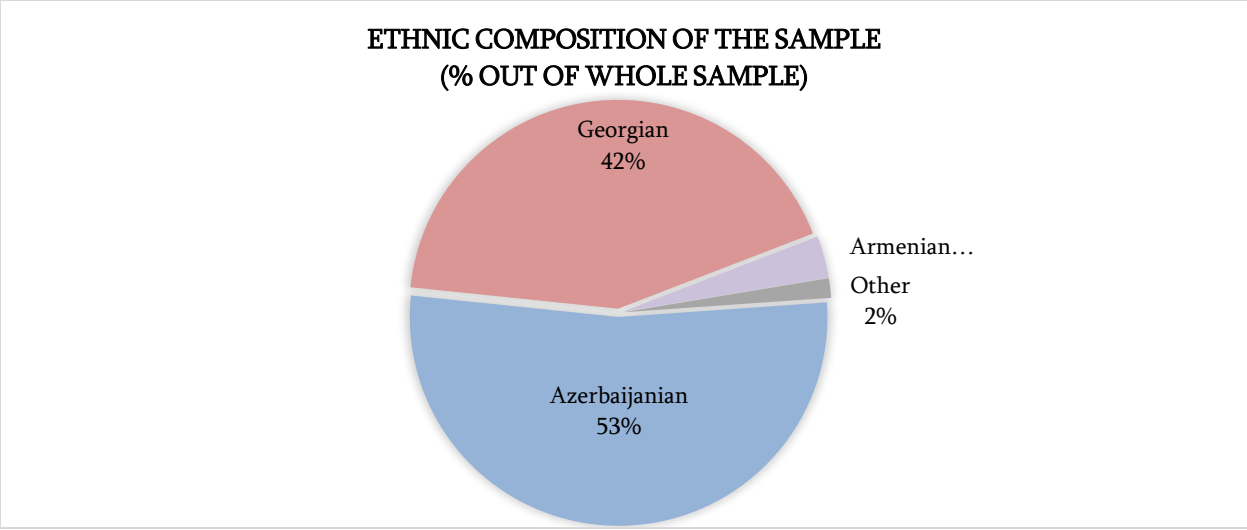
Behavioral changes on market - Reinvestment in agriculture	Attributable changes in the amount of money invested in livestock sector by farmers	changes in the amount of money spent in agriculture by farmers, caused by the interventions
	Attributable changes in a number of animals possessed by farmers	changes in number of livestock possessed by target population caused by the interventions

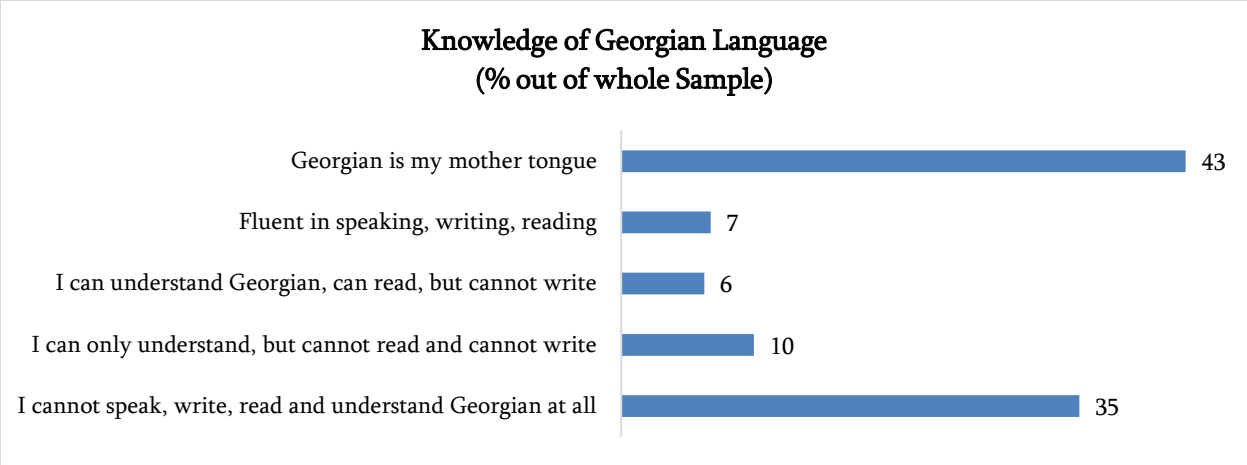
ANNEX B: PROFILES OF BENEFICIARIES

C.1 DEMOGRAPHIC CHARACTERISTICS:

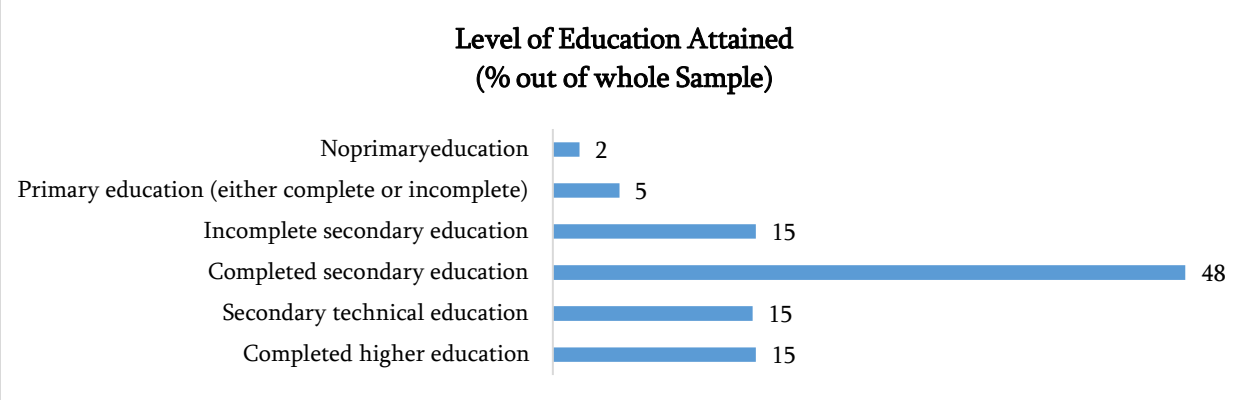


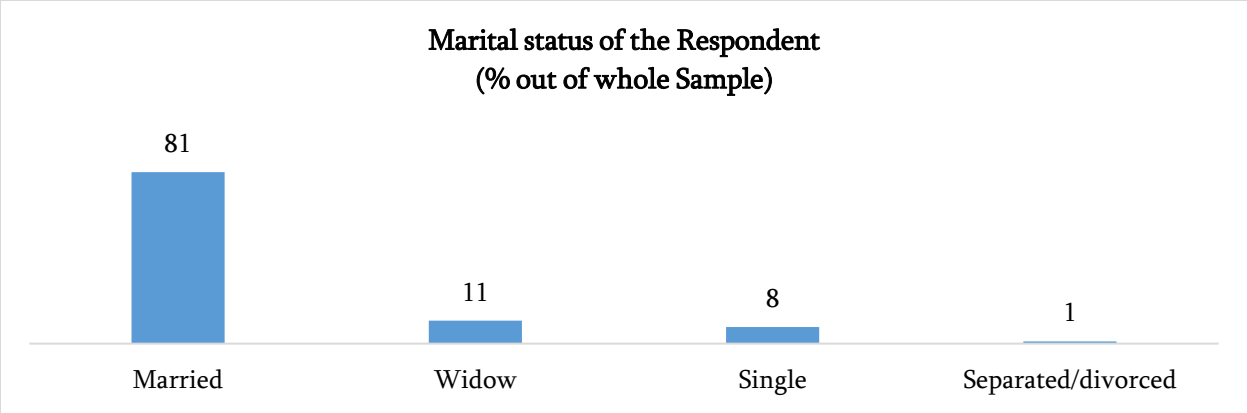


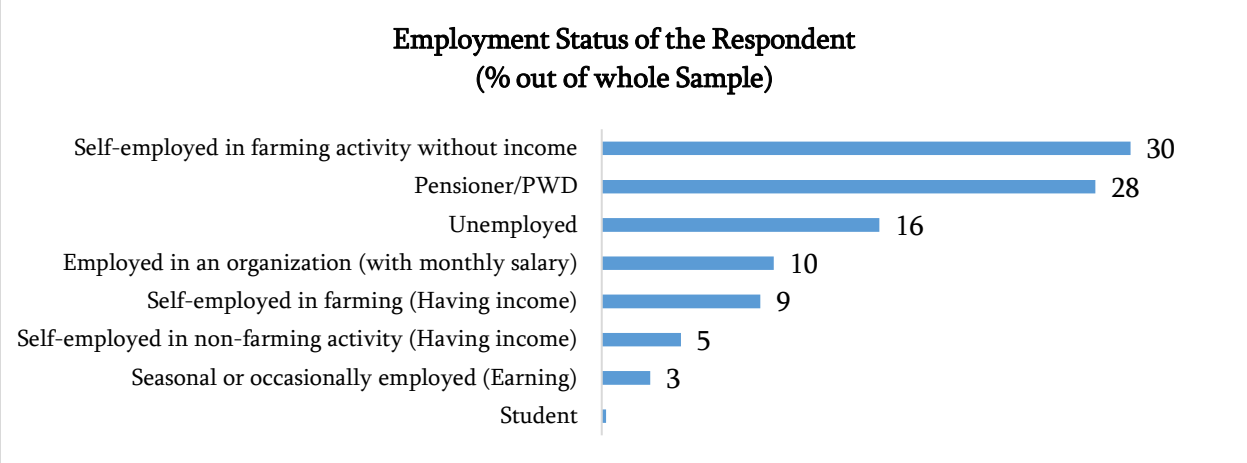




C.2 Respondents' Profiles:



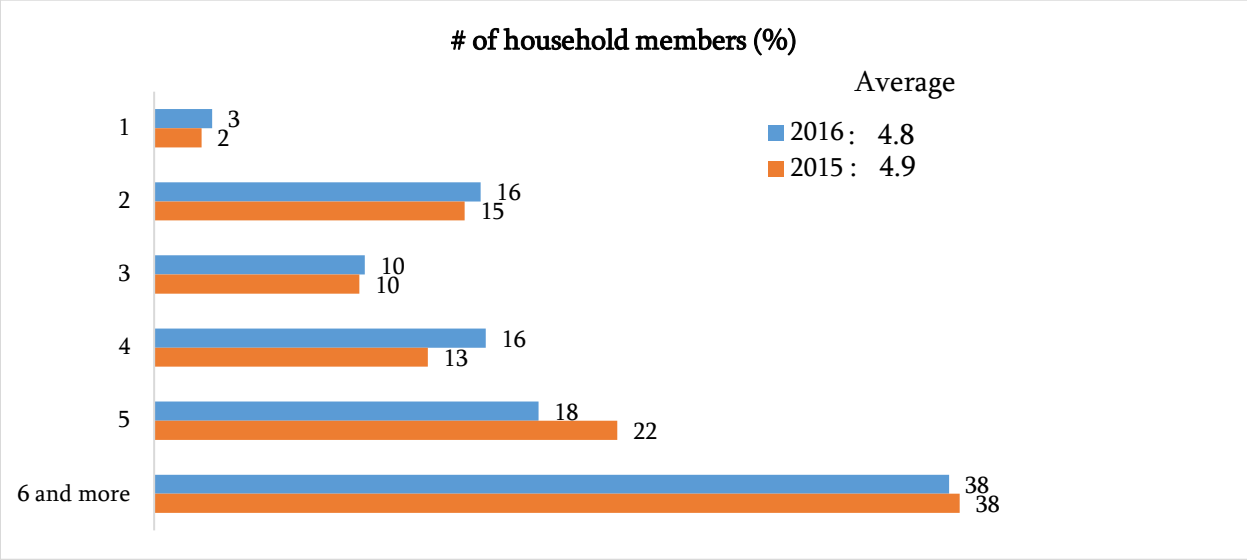


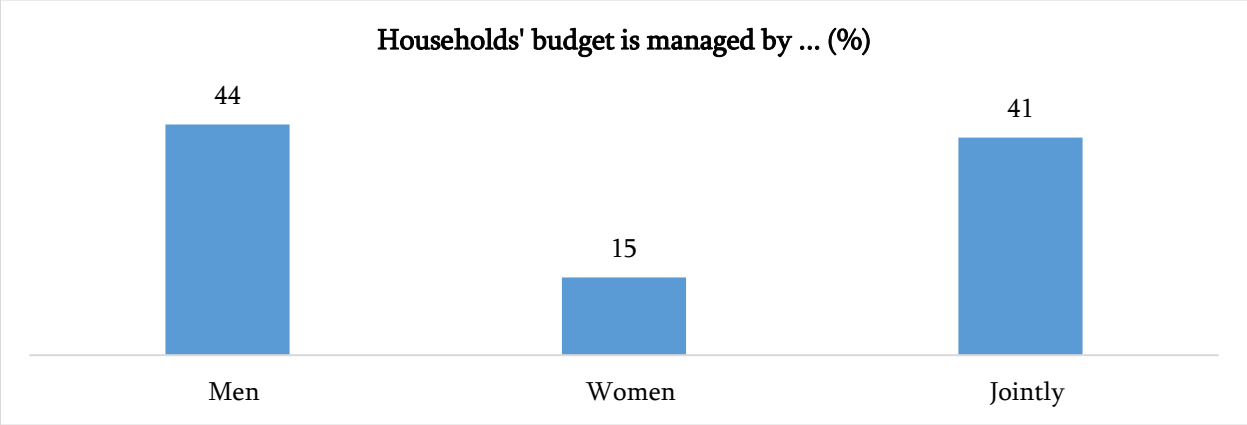


[23]

[23] There are two types of farmers who are 'self-employed in farming activities: Those who sell their production and 'Having income' and those who use the product for household consumption 'without income'. The answers are based on the farmers' subjective assessment of their employment status.

C.3 HOUSEHOLDS' PROFILES:





ANNEX C: SUSTAINABILITY DASHBOARD INDICATOR DEFINITIONS

The sustainability index was assessed according to the following criteria:

Systemic changes - Systemic change can be broadly described as "alterations in the structures or dynamics of a market system leading to new patterns of behavior of market system actors" (such as in private sector, government, civil society, public policy level).

When rating an intervention in context of systemic changes, it measures its achievements in perspective of three key characteristics of systemic change- scale, sustainability and resilience which all contribute to poverty alleviation and the transition to a durable market economy for the livestock sector.

Scale - Systemic changes benefit a large number of people not directly involved in the original intervention e.g. farmers in other areas who are also seeing improved access from programme clients and other suppliers

Sustainability- Systemic changes continue long after a programme ends; market changes are likely to continue but they will expand, reaching greater scale

Resilience -Market players adapt to changing contexts to continue to deliver pro-poor growth. e.g. input suppliers/ clients diversify its operations, expand distribution across the country and region, reach credibility to lobby the government, and make them accountable to be responsive to their concerns.

NAIC – Net Attributable income change

Measured based on the extent of Net Attributable Income Change generated by the programme beneficiaries from the particular intervention

Innovation - The intervention is assessed in context of how innovative it was in itself including those further innovations that developed as the intervention developed over time. E.g. technological innovations, add on's to the original facilitation, network and linkage development from newly created platforms for new products.