



# ADVANCED RURAL DEVELOPMENT INITIATIVE

## COMMUNITY COMPETITIVENESS ASSESSMENT

### Mets Ayrum



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## INTRODUCTION

This report presents the results of the community competitiveness assessments conducted in the framework of the Advanced Rural Development Initiative (ARDI) program financed by the United States Agency for International Development. The ARDI project is implemented by Fuller Center For Housing Armenia (FCHA) in cooperation with Heifer International Armenian Branch Office (HA). The assessments are conducted using the methodology developed by HA. This is a part of series of assessments conducted in 20 rural communities.

ARDI sets out to increase rural employment by tackling constraints to rural economic development of communities in the Syunik, Vayots Dzor and Lori Marzes (provinces) of Armenia. The project forms partnerships with local governmental and non-governmental organizations (NGOs) to effectively and efficiently enhance value chains and increase incomes through participatory planning. ARDI builds the capacity of institutions and communities, promotes small businesses development and entrepreneurship and invests in select sustainable infrastructure and enterprise projects.

In the framework of the project 20 rural communities undergo community assessments which are aimed to identify the competitive advantages of target communities and high potential value chains in these areas. The evaluations are based on HA's Community Strategic Development Model (CSDM) Methodology and include strong community involvement. Based on the results of the community competitiveness assessments, 12 rural communities are eventually chosen for programmatic interventions and direct investment.

The community competitiveness assessments help us understand what resources a community has, how effective the community is in capitalizing its resources and evaluate the untapped potential of community to leverage its resources. Assessments also involve inventorying of all community assets including physical infrastructure and evaluations of the community environment for economic development, which we refer to as "enabling environment". As a result of the assessments a thorough image is created of the resources and capacities of a specific community.

The community competitiveness assessments and subsequent selection of communities in the framework of the ARDI program will be followed by more in-depth value chain assessments. These assessments will focus on the three main value chains targeted by the ARDI program namely dairy, fruit and rural tourism, and will identify the specifics and the potential of each value chain to create employment opportunities and community economic growth in targeted community clusters.



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# 1. METHODOLOGY

Traditional community development approaches have predominantly focused on community deficiencies and less on community strengths which often has contributed to lower impact and effectiveness of these initiatives.<sup>1</sup> Such an approach often also leads to narrow targeting of very specific community problems while missing more systematic solutions that may have resulted in more sustainable and effective outcomes.

With this in mind, Heifer Armenia developed the Community Strategic Development Model (CSDM) which is a unique approach to community development, combining the strengths of asset-based community development approaches with more traditional problem identification methods. Such a holistic approach allows identification of solutions that address existent issues effectively through factoring in the specific strengths of a community. Being fully participatory, HA's methodology allows:

- Effective collection of information on community resources and needs
- Identification and addressing/utilization of actual community problems and strengths, while avoiding the “perceived” vs. “real” problem trap
- Bottom-up community-driven development process along effective top-down planning approach and institutional and community capacity building

HA's model involves four distinct steps, which are logical and organic continuation of each other. These steps facilitate the process of taking the communities from strength and problem identification, assessment of economic development enabling environment, strategizing community development patterns, professional assessment of those patterns in terms of economic feasibility and environmental impact, to development of specific projects and implementation.

The first step of the CSDM model involves Community Competitiveness Assessments (CCAs) which form the primary focus of this report. For the CCA's a series of thorough workshops are conducted which are led by external facilitators and include representative focus groups from the community. The focus groups are formed from 10 to 12 people from the community, who represent different interest groups including local governance bodies, schools, business sector, farmers etc. This enables capturing a broad information base with different perspectives. The four steps of the model are as follows:

- Assessment of Capacity/Resources and Enabling Environment
- Assessment and mapping of community Strategic Direction/Development pattern
- Development and Initiation of specific projects
- Management and evaluation

As a result, CCAs involve discussion, analysis and inventory of community capacities and resources, such as human, physical, capital, natural, financial resources, explores Health, Education, Knowledge, Skill, Ability (KSA) capacities of the community, as well as main (previous and current)

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<sup>1</sup> McKnight, John L. and John P. Kretzmann. 1993. Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets. ACTA Publications: Chicago.

production patterns, employment situation, infrastructure conditions and major projects implemented in the community by Governmental and Public organizations.

Once the status quo of community resources and capacities is identified the focus group evaluates utilization level of these resources as low, medium or high. This step identifies how efficient the community is in capitalizing community resources and identifies the potential of the community to leverage and capitalize further on these resources.

Assessments also focus on the enabling environment for economic development in the community. This is a crucial point in community competitiveness assessment process, as the environment (government and policy and ability of the community to reach other) is an overarching issue which directly influences all aspects of community development. Assessment of the environment is done through scoring with scores from one to five, “one” being the lowest and “five” the highest possible score. The scoring is done on selected features which can describe the level of environment supportiveness for community economic development. The features focus on variables, such as local government interest in strategies for community economic development, existing policies and their implementation, interactions between local government and business, existence and supportiveness of specialized economic and business support structures and also the (geographic) position of the community to play a positive role in the region. Communities that score high on these features are considered having enabling environment and having increased competitiveness and low risk for economic development initiatives.

As a result of the assessments a thorough image is created of the resources and capacities of a specific community. Communities that score high on the evaluated areas are considered competitive and communities which score high on enabling environment and score low in resource utilization are considered for economic development interventions and projects. This cross-referencing and cross-assessment allows better targeting of communities where ARDI interventions can have higher impact. This report presents the findings of community competitiveness assessment on Mets Ayrum community.

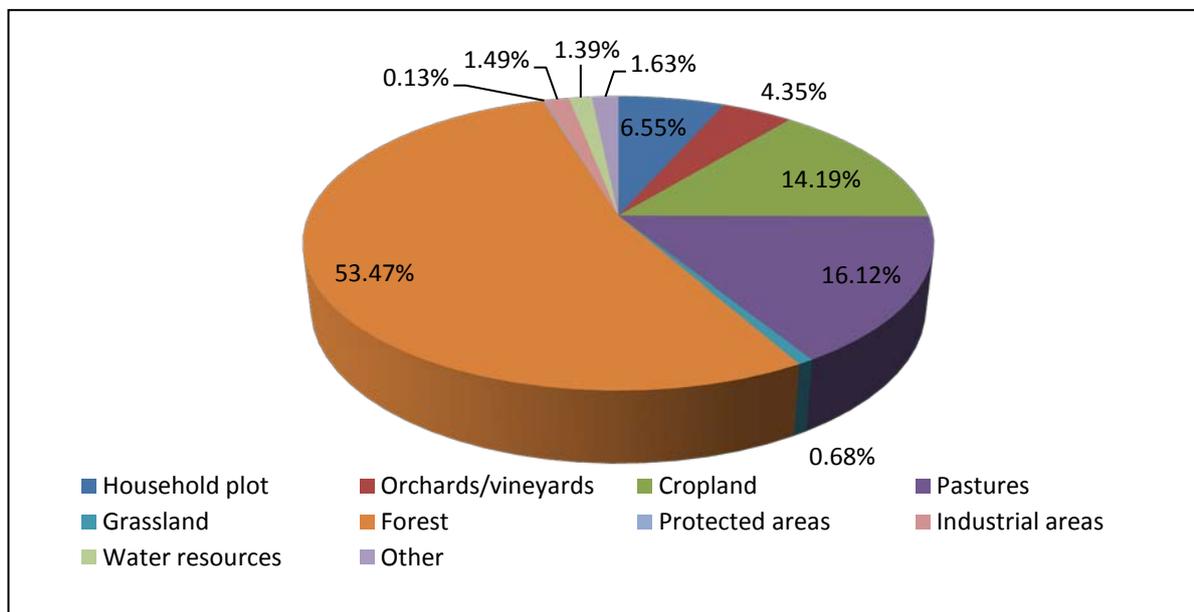
## 2. COMMUNITY PROFILE

Mets Ayrum is located in the former Tumanyan Region of Lori Marz not far from Alaverdi and 69 km from Vanadzor. The community is positioned close to the physical border between Armenia and Georgia in the very green Lori Marz /province. Mets Ayrum is located on 780 m above sea level latitude and has a mild climate. The neighboring communities are Tchotchkan (3 km), Shnogh (12 km, Akhtala (7 km) Shamlugh (12 km) and Neghots (7 km).

### 2.1. Community Territory

The total surface area of Mets Ayrum covers an area 1999.26 ha of land which includes various land classifications. The official classifications of the community land as registered in the community register are presented in the following chart.

Figure 1 Community land Classification



Source: Mets Ayrum Community Land Register

Similar to other neighboring communities in the Lori region a major share of Mets Ayrum's territory involves forests which make up about 53 percent of the total community territory. The remaining three large land classifications are pastures and croplands covering about 16 and 14 percent or 322 ha and 283 ha of the land respectfully.

The mild climate in the community as well as relatively low latitude above the sea level allow to grow almost all kinds of fruits and vegetables cultivated in Armenia. Also the availability of large household plots in the community provide the community members with the opportunity to cultivate orchards and produce good quality fruits.

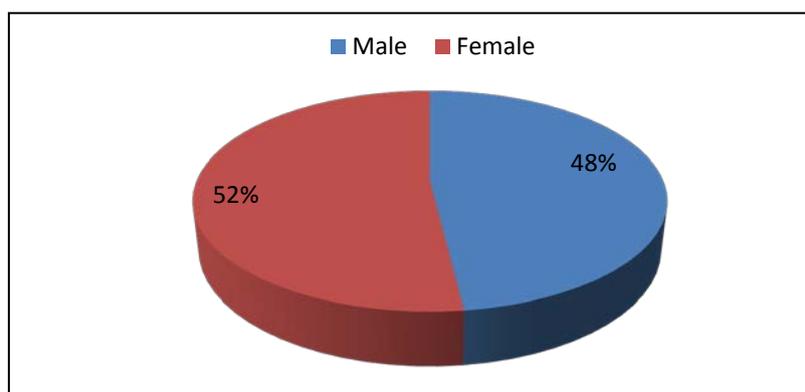
The community on the other hand has relatively small pastures and grasslands (336 ha cumulatively) which do not provide enough fodder for all the community cows and have cow/animal to pasture

ratio of 1.6, which is slightly less than required 1.89 ha (taking into account average yield of one ha of pasture/grass land)<sup>2</sup> per cow/animal to provide adequate fodder base for community animals.

## 2.2. Demographic Profile

Currently Mets Ayrum houses 310 families and has a de facto population of 1154 people, of which 555 male and 599 are female.<sup>3</sup> Compared to de facto population figures of the community in 2001 which was 808 people the population of Mets Ayrum grew during the last decade despite the economic conditions and migration.

**Figure 2** Gender Classification of the community



**Source:** CCA Workshop Data - Heifer Armenia Calculations

About 54 percent or 627 people of the population of Mets Ayrum are working age population aged 16-65. About 18 percent or 211 people of the total population are young individuals aged between 15-29 years old. This is a relatively low percentage compared to the Lori Marz average as Marz level statistics reveal a 22 percent population share in this age group. Table 1 presents the age segmentation of young population groups at community and Marz level in more detail.

**Table 1** De facto Population by Age (number and % of total population)

	15-19	20-24	25-29
<b>Mets Ayrum</b>	84 - 7%	76 - 6%	51 - 5%
<b>Lori Marz</b>	9916 - 9%	7297 - 7%	6040 - 6%

**Source:** CCA Workshop Data - Heifer Armenia Calculations and NSS data <sup>4</sup>

The average share of the selected age groups of the total community population is below or equal to marz level average. Mets Ayrum therefore does not have an above average percentage of young individuals in the community which could allow planning and implementation of youth specific (long term and sustainable) interventions by the ARDI program.

<sup>2</sup> Sahakayan Razmik, Productive Pasture Management training Material, Community Agricultural Resource Management and Competitiveness (CARMAC) Project

<sup>3</sup> Heifer Armenia database of official statistics provided by community centers.

<sup>4</sup> National Statistical Service of RA (2003), Results of 2001 Population Census OF RA (Figures of Marz Lori), available at: [www.armstat.am](http://www.armstat.am)

## 2.3.Economic Profile

Results of community assessments point that horticulture, livestock breeding and beekeeping are the main economic sectors of Mets Ayrum community. As presented in Table 2, the total average output of the Mets Ayrum in dairy sector is 340 tons of raw milk per year.

In comparison with other communities in Lori Marz, Mets Ayrum produces relatively small volumes of milk (on average 5.6 liters of milk per animal per day). About 20 percent of the produced milk and dairy products is sold and, the rest is consumed by household members. Sales of milk and dairy products generate about AMD 13.6 mln annually.

**Table 2** Main Agricultural Outputs of Mets Ayrum

Economic Sectors	Annual Agricultural output	Percentage Sold	Monetary Output (mln AMD)*
Animal Husbandry/raw milk	Milk 340 t	10% - 20%	13.6
Beekeeping	1.5 t	90%	4.05
Fruit	980t (grapes 250,persimmon 150, apple 100, pears 30, pomegranate 30, figs 20, cornelian cherry 30, peach 150, cherry 100, mulberry 100, quince 20)	80%	207
Vegetable	400t (Tomatoes 100, Beans 30, onion 250, cucumber 20)	60%	36,6

\* The output calculations are based on average (retail) sells prices of specific products and reflect retail prices (actual milk and meat prices received by farmers are likely to be lower than official average retail prices.

AMD prices per kg/l: milk 200, honey 3,000, apples 50, pears 50, plums 50, persimmon 200, pomegranate 600, fig 300, cherry 400, mulberry 800, quince 200, grapes 130, tomatoes 150, beans 300, onion 150, cucumber 200.

**Source:** CCA Workshop Data - Heifer Armenia Calculations

As mentioned already, the community has considerably large land area and very rich soil for horticulture production, mainly fruits. Community members have rich orchards and are cultivating different types of fruit. The mild climate and rich soil create favorable conditions for fruit production. Currently the community in average produces 980 t of fruit cumulatively per year. Next to apples; peaches and pears which are quite traditional for Armenia, Mets Ayrum also produces valuable sorts of grapes, persimmons, mulberries, figs and quince. This generates a monetary output of around AMD 207 mln annually and points towards a big potential of the community to further develop the fruit value chain. The fruit value chain in more details is described in the latter chapter.

The community also produces vegetables such as tomatoes, beans, onions and cucumber, 60% of which are sold in the nearby markets and are generating about AMD 36.6 mln in revenues every year. There are also 120 beehives in Mets Ayrum which in total annually produce about 1.5 t of honey. Honey is sold relatively easy as about 90 percent of the output reaches customers, generating AMD 4.05 mln income for community members.

To identify possible alternative economic development directions, focus group members were also requested to highlight possible alternative economic sectors for their community. This includes sectors or fields of occupation which currently are not tapped into adequately. These sectors provide further opportunities for the community to capitalize existing resources, boost entrepreneurship and eventually generate higher community output. The following sectors were identified as high potential alternative sectors by community members:

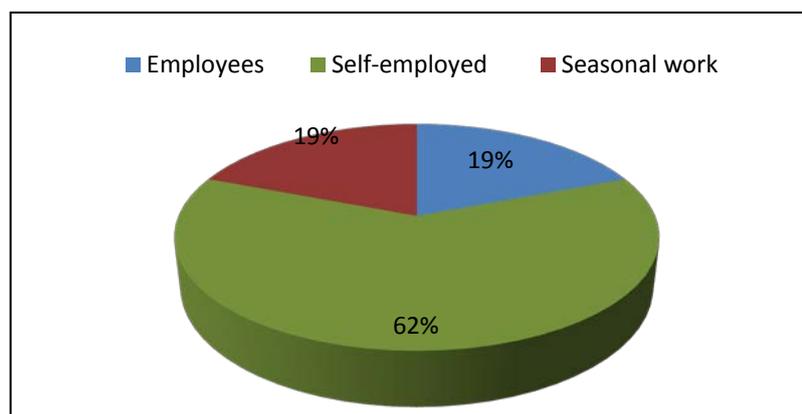
- Rabbit farming
- Poultry breeding
- Rural tourism

Moreover, the impressive nature which surrounds the community and a good number of cultural and historical monuments can serve as attractive attraction to many visitors to the community and its surroundings. Yet possibilities of this sector are again not utilized as there are no places for the visitors to stay and no additional hospitality services are offered such as restaurants spas etc. A more detailed elaboration on (a potential) tourism sector in Mets Ayrum is provided in chapter 3.

## 2.4. Labor Force and Employment

Currently Mest Ayrum has a working age population of 627 people (de facto population between 16 and pension age 64). 120 individuals or about 20 percent of this group have permanent employment; this excludes the number of people who are self-employed and mainly involves civil servants and those who receive regular salary from private institutions/organizations, including teachers and staff of the local school. The occupation of the working age population in terms of regular employment, self-employment and or seasonal work is illustrated in the following figure.

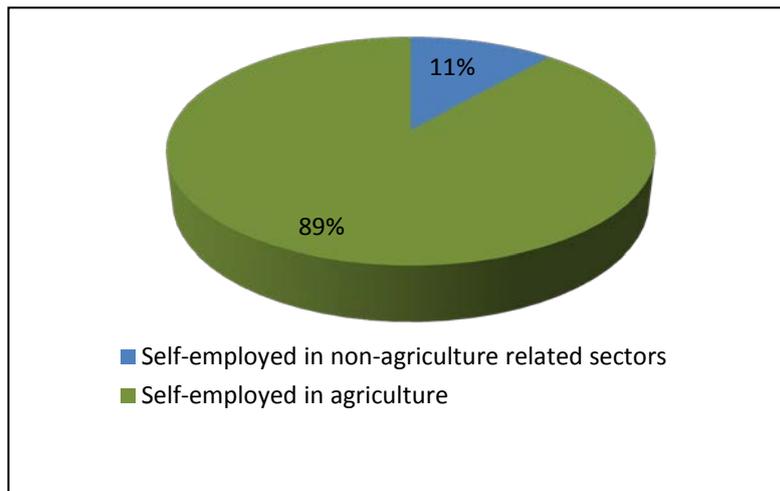
**Figure 3** Occupation of Working Age population



**Source:** CCA Workshop Data - Heifer Armenia Calculations

As illustrated above, about 20 percent of the working age population is engaged in seasonal work which involves seasonal work outside of Armenia. The community is mainly reliant on self-employment and entrepreneurship as there are no other job opportunities available. About 62 percent of working age population in Mets Ayrum are self-employed. Of this group just 11 percent are occupied in non-agriculture related and 89 percent are self-employed in agriculture related fields of occupation (See Figure 5).

**Figure 4** Direction of Self Employment

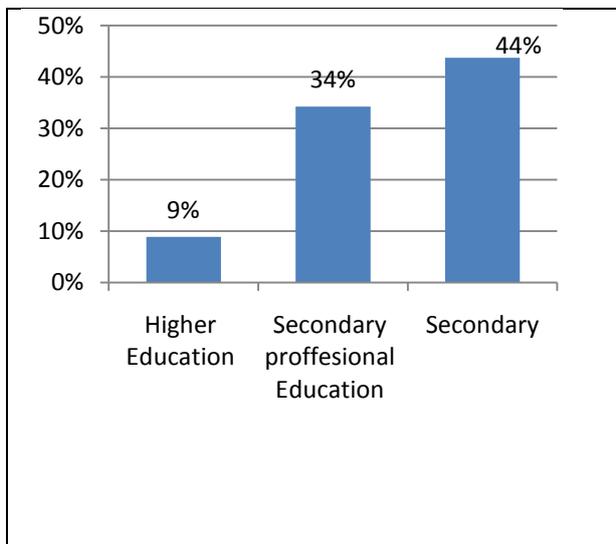


**Source:** CCA Workshop Data - Heifer Armenia Calculations

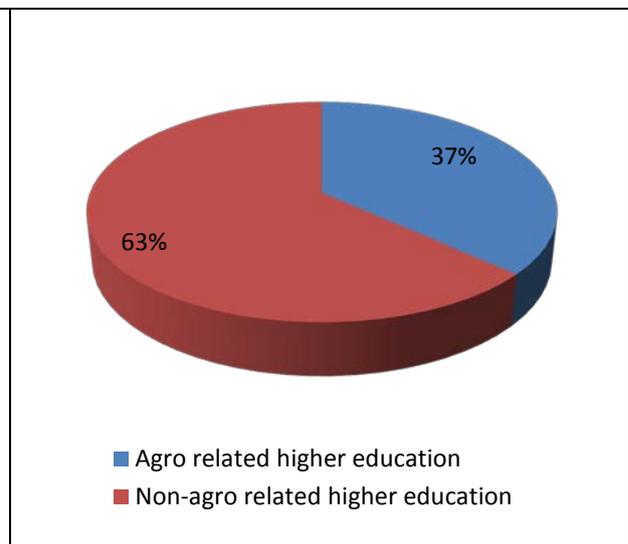
The vast majority of the community population is therefore self-employed in the agricultural sector. Self-employment however does necessary mean regular income; this is made even more obvious by the results of community consultations. The latter revealed that only 11 percent of the self-employed in agriculture have sufficient access to buyers in terms of regular sells with appropriate volumes and so the remaining majority is often mainly involved in subsistence farming.

In terms of education, around 44 percent of the population of Mets Ayrum or 505 people have completed secondary education, and 43 percent or 395 people have completed secondary professional (college) and or university education.

**Figure 5** Community Education level



**Figure 6** Field of Higher (Professional) Education



**Source:** CCA Workshop Data - Heifer Armenia Calculations

Mets Ayrum has considerable human resources in both agriculture related and non-agriculture related fields. As presented in the figures above, of the population with professional education (secondary professional education and or higher education) about 37 percent has agriculture related education and the remaining 63 percent is educated in non-agriculture related fields. People who have non-agriculture related education are mainly educated in the fields of management,

engineering and finance. The latter is particularly important for setting up/development of businesses and/or rural cooperatives where adequate financial management is crucial. There is only one person who has formal tourism related education.

**Table 3** Experts In non-agricultural and agriculture related fields.

Non-agricultural related	Number of Experts	Agricultural fields	Number of Experts
Finance	75	(Milk) technicians	42
Engineering	93	Engineering	38
Management	81	Management	55
Tourism	1	Veterinarian	10

**Source:** CCA Workshop Data - Heifer Armenia Calculations

With regard to agriculture related education and expertise, there are 42 milk technicians, 38 engineers and 55 individuals with an agro management related expertise. The community has also 10 veterinarians who could serve respective community needs. Existence of adequate number of vets in the community is significantly important for the development of a healthy cattle and animal husbandry. The remaining people who have agriculture related education are specialized in agro technology, agro engineering and or management related education.

Thus Mets Ayrum has considerable human resources both in agriculture and non- agriculture related fields and has a capacity to boost community development in both dairy and horticulture sectors.

## 2.5.Environmental Situation

This sub section of the assessment is mainly aimed at evaluating the exposure of the community to various kinds of environmental threats. Community members were given the opportunity to highlight the main issues that currently threaten the natural environment of the community and evaluate the impact level of these issues on Mets Ayrum’s development. Focus group members highlighted the following issues as the main factors threatening the natural environment:

- Tailing dump of Akhtala Ore Dressing Combine
- Deforestation

As the main issue threatening the natural environment of the community, focus group members mentioned the tailing dump of the nearby Akhtala Ore Dressing Combine, which is situated between Tchotchkan and Mets Ayrum communities. The dump is not fenced and is completely open, which creates potential danger for animals and humans. Besides there were cases when the dump wastes leaked into Debed river and Lori canal, from where irrigation water is pumped for community orchards. Community inhabitants are continuously complaining of headaches and different health issues. Though the tailing dump is situated on attitude lower than the community lands and is not damaging the crop directly, the evaporations of the dump are a real danger as for the health of the community members, so for the animals and for horticulture in general. Moreover having a tailing dump in such proximity to the community suspends tourists from visiting it and staying there for more than one day.

As it was already mentioned Mets Ayrum also has a vast forest area which is considered a large resource for the community. Similar to the other communities in the region, due to the low buying power of community members and the relative affordability of wood compared to natural gas and electricity as energy source for heating, (danger of) deforestation in Mets Ayrum has increased.

### 3. COMMUNITY RESOURCES

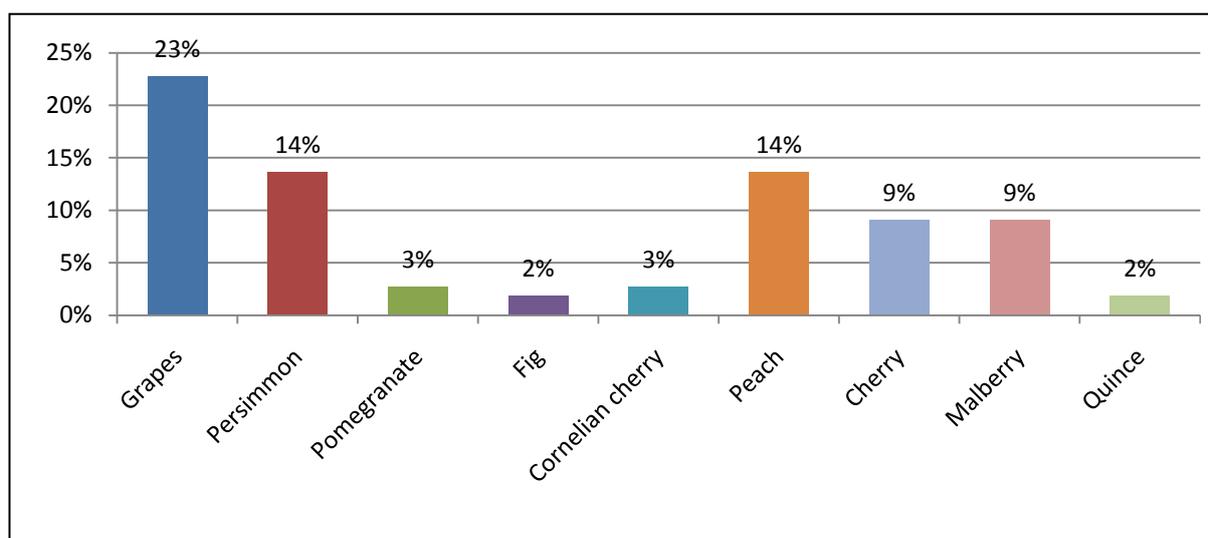
This section of the community assessments focuses on the resources and capacities of target communities in the three main target sectors/value chains of the ARDI program. This involves the Dairy, Fruit and Rural Tourism value chains. The results presented in this sub-section will allow us to narrow down the focus of community assessments and evaluate the potential of a community to or community cluster to receive ARDI specific investments.

Community resource assessments also involve evaluation of community infrastructural resources. This will include inventory of community infrastructure in terms of existence and condition of community infrastructure including but not limited to drinking and irrigation water systems, community and intra community roads, educational cultural and community governance buildings, community centers, IT and communication infrastructure, leisure and sport facilities, agricultural resources and technologies such as anti-hail systems and other infrastructure. An overview of the existent infrastructural assets of the Mets Ayrum community is provided in ANNEX 2 of this report.

#### 3.1.Fruits Sector Capacity

Fruit production volumes in Mets Ayrum are relatively high. As it was already mentioned the community has a very rich soil and favorable location above the sea level, which contribute into possibility of growing fruit of higher value such as persimmons, quinces, table sorts of grapes, figs and pomegranates, apart from the traditional apples and pears. Below figure illustrates average volumes and shares of the fruits produced.

Figure 7 Types of Fruit Produced



Source: CCA Workshop Data - Heifer Armenia Calculations

The fruit that is produced by the farmers is mainly sold in the nearby markets to individual buyers. The fruit is also used for production of homemade liquors and are sun dried. However, as the community does not have fruit cooling and storage equipment, the farmers have to sell their crop during the peak seasons on the lowest retail price. Whereas being able to store for example grapes and persimmons for a couple of months could enable them to sell the fruit at double price and make much better profit than they do today. The farmers recognize community's exceptionally favorable conditions for further developing the fruit production sector and growing their orchards. But they also note that with the current income level they are unable to invest into fruit nurseries, orchards or equipment. Mets Ayrum has a solid base of professionals ready to invest their time and knowledge and though lack the appropriate funds and resources.

### **3.2.Dairy sector capacity**

As it was mentioned before in this report Livestock production is currently not the main economic sector in Mets Ayrum. About 90% of raw milk produced is used for the households own needs. The remaining 10% is sold on irregular basis to small processors and individual buyers and generates about AMD 6.8 mln annually. There are only 5 farmers who possess 4 or more milking cows and their raw milk production volumes can hardly be considered as a base for further development of the dairy value chain.

The small volumes and engagement of the community members in dairy sector are conditioned by small pastures and grasslands owned by the community and thus insufficient fodder base for further livestock quantity development.

Moreover, the community does not have any sector related infrastructure; there are currently no milk collection/cooling units. This is another reason why the community has so far not been concerned with developing this sector. Only small quantities are sold to individual buyers, and the rest of the milk is collected by the small processors or is sold to Vanadzor cheese factory.

To conclude the community might have a potential to develop their dairy production and get engaged into respective value chain, however the resources of the community, such as pastures and grasslands availability, and the overall interest of the community members to be engaged in the dairy farming and milk processing is making the dairy sector in this community less promising and decreases its potential.

### **3.3.Tourism Sector Capacity**

Mets Ayrum currently attracts on average about 50 foreign and some 150 local Armenian tourists every year. Similar to many other communities in the region which are located on the river, these are mainly day tourists who do not spend the night in the community. Tourists mainly hear about Mets Ayrum from word of mouth as there are no professional tour agencies which promote the community and organize tours to Mets Ayrum and its surroundings.

Currently there are no B&Bs or any other formal accommodation services offered in Mets Ayrum. The nearest hotel is located in Haghpate, which is 7-8 km far from Mets Ayrum. This hotel can house about 50 tourists at a time.

However the community members believe that there is potential for B&B facilities in Mets Ayrum and are confident that the availability of such facilities will attract more foreign tourists. This

confidence is based on the fact that last summer a group of hiking tourist has spent a night camping nearby the community mayor's office. The tourists were amazed by the natural beauty of the community and the people's hospitality.

Mets Ayrum's has vast natural resources and historical and architectural monuments which always have attracted visitors. Thus back in the Soviet times there was a guest house built on the shore of picturesque Ayrum lake specifically for the high ranking officials to visit and to stay there. Currently the house is in dilapidated conditions and is not functional at all. However if repaired and renovated the house can serve as a guest hosting facility.

The main historical monuments in relative proximity to the community are:

- Martyrs' church in the forest
- Akhtala monastery
- Big number of cross-stones (khachkars) in the forests
- Famous Haghpat monastery is also situated relatively close – on some 7 km distance from the village

The natural attractions in nearby Mets Ayrum are:

- The forest which is a rich wildlife habitat with rare and diverse range of animals including bears
- Mountains and other attractive places for hiking tourists
- Lake Ayrum,
- Abundance of medical herbs

Next to natural and historical attractions the community can also offer a range of local culinary specialties such as:

- Pahlava
- Goose khokhop
- Zhingyal bread

As festivities celebrated in the community along with holidays that have special meaning for community members and could attract tourists, the community members mentioned:

- Victory day,
- International Children's day
- Vardavar (Armenian famous water festival, when people drench each other with water)

Community members have some informal experience related to B&B services provision on a very irregular basis but currently there are no formal hospitality service providers in the community such as restaurants, hot water spas etc. There are also no established links with external tourism related markets and agencies which promote and link it with tourists. As the main issues hampering tourism development in the community focus group member indicated:

- Lack of information dissemination or lack of awareness of potential tourists about the touristic value of the community

- Lack of essential infrastructure such as minimum required living conditions such as renovated bedroom and toilets etc.
- lack of training and sector related knowledge of community members on the tourism sector
- Tailing dump situated in a close proximity to the community.

Yet, despite the mentioned issues, community members believe that Mets Ayrum does have a large potential for development of tourism in the community and this can serve as an alternative economic sector and income source for community members.

### 3.4. Score of Community Resources

This sub section presents the quantitative summary of Mets Ayrum's resource assessment as evaluated in the framework of the ARDI Program. The evaluations are mainly based on primary data collection through community consultations. The following table presents the scores of Mets Ayrum community regarding various general and value chain specific resources.

The maximum possible score on community resources is 200. The scoring is done based on mathematical assessments and ratios and expert evaluations. The scores are on a scale of 1 to 5, where 1 is low and 5 is maximum high. The weights add up to a total of 10 in each category where 1 is low and 10 is high. The exact appraisal approach and relevant description is provided in ANNEX 1.

**Table 4** Mets Ayrum Community Resources (on a scale of 1-5)

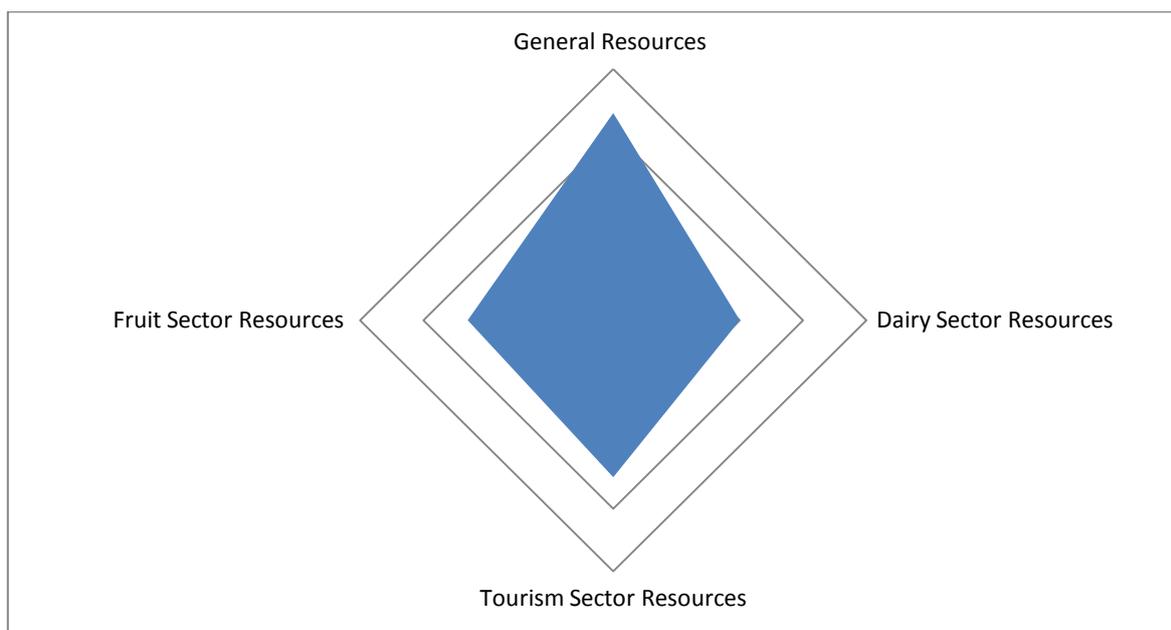
Indicator	Score	Weight	Weighted Score
<b>General Community Capacity</b>			
Community Educational level	4	3	<b>12</b>
Community vitality	3	3	<b>9</b>
Community infrastructure (existence and condition of roads, water, energy sewage etc.)	2	2	<b>4</b>
Community Natural resources	4	2	<b>8</b>
<b>Total Score General Community capacity</b>			<b>33</b>
<b>Dairy sector capacity</b>			
Milk Production (Milk production/per capita)	2	4	<b>8</b>
Milk Productivity (Milk production/animal head ratio etc.)	3	2	<b>6</b>
Fodder Availability (Animal/pasture)	1	3	<b>3</b>
Dairy sector related experience and infrastructure	3	1	<b>3</b>
<b>Total Score Dairy Sector Capacity</b>			<b>20</b>
<b>Fruits sector capacity</b>			
Ability to produce quality fruit	1	4	<b>4</b>

Fruit quality	4	3	<b>12</b>
Existence of Fruit infrastructure (hail centers etc.)	3	2	<b>6</b>
Fruit sector related experience and knowledge	3	1	<b>3</b>
<b>Total Score Fruit Sector Capacity</b>			<b>25</b>
<b>Tourism Sector Capacity</b>			
Tourism related resources as natural, cultural etc.	4	3	<b>12</b>
Current tourist visits to the community	3	2	<b>6</b>
Existence of tourism infrastructure (B&Bs, restaurants, spas etc.)	1	3	<b>3</b>
Existence of tourism related experience and knowledge	1	2	<b>2</b>
<b>Total Score Tourism Sector Capacity</b>			<b>23</b>
<b>Total Score Community Resources</b>			<b><u>101</u></b>

Source: CCA Workshop Data - Heifer Armenia Calculations

The highest scores of Mets Ayrum regarding Community Resources relate to general community resources with the score of 33. The second highest was of the Fruit sectors with score of 25. The fruit sector capacities of the community scored the highest regarding value chain specific areas. Mets Ayrum has a high score on quality fruit production volumes and scores low on fruit value chain related infrastructure and knowledge and experiences available in the community. The third highest score of the community related to the tourism sector. In relation to dairy sector Mets Ayrum scores relatively high for the per capita raw milk production and scores low for fodder and resource availability for this specific value chain. The total weighted score of Mets Ayrum on community resources is 101. The following figure presents a visual illustration of the community resources in the four indicated areas.

**Figure 8** Mets Ayrum Resource Map



#### 4. RESOURCE UTILIZATION

As a main part of HA’s community assessment model, this subsection of the assessment focuses on evaluating the utilization level of community resources. Evaluating utilization levels will allow us to better understand the need of the community for programmatic interventions in the evaluated areas.

The following table presents the resource utilization scores of Mets Ayrum community regarding various general and value chain specific resources. The scoring is again done based on objective mathematical assessments and ratios and expert evaluations. The utilization scores involve a scale of 1 to 5, where 1 is low and 5 is the maximum high. Consequently, low weighted scores on resource utilization indicate that resources of the community in a specific field are under-utilized. The included weights add up to a total of 10 in each category, where 1 is again low and 10 is high.

**Table 5** Mets Ayrum Community Resources Utilization (on a scale of 1-5)

Indicator	Score	Weight	Weighted Score
<b>Dairy sector capacity</b>			
Utilization of fodder base (Animal/pasture on a scale of 5-1)	4	3	<b>12</b>
Milk collection level (production/collection on a scale of 1-5)	2	4	<b>8</b>

Community milk Productivity	2	1	2
Overall dairy sector resource utilization *	2	2	4
Total Dairy Sector (Max 50)			26
<b>Fruits sector capacity</b>			
Utilization of quality production capacity	2	3	6
Current sells of quality fruit production	3	3	9
Professional Fruit processing	2	2	4
Overall fruit sector resource utilization	2	2	4
Total Fruit Sector Max 50			23
<b>Tourism sector capacity</b>			
Use of natural, cultural and other resources for community development)	1	4	4
Revenue generation through hospitality services (as B&Bs, restaurants, etc.)	1	3	3
Professional use of tourism related Knowledge and HR capacity	1	2	2
Overall Tourism sector resource utilization	1	1	1
Total Tourism Sector Max 50			10
<b>Total Score Resource Utilization</b>			<b><u>59</u></b>

**Source:** CCA Workshop Data - Heifer Armenia Calculations

\* The general evaluations of each sector involve expert evaluation of various components of influence to sector capacity and its utilization. Regarding the dairy sector for example knowledge and experience of the community in this specific sector, willingness of the community to invest in the sector and other such factors were taken into account.

The total resource utilization score of Mets Ayrum community was 59 out of 150. The lowest score of the community in this regard related to the tourism sector resource utilization as similar to many

other rural communities in Armenia there is hardly any economic activity in this sector. Natural, cultural and other resources of the community with touristic value are not being utilized for commercial purposes. With a total weighted score of 10, tourism sector is the most under-utilized sector of the community evaluated in this framework.

The second underutilized sector of the community is the fruit sector which scored 23. This involved utilization of production capacities regarding high quality (marketable) fruit. As discussed in section 3.1, the capacities of Mets Ayrum regarding high quality fruit production are high, again due to natural climatic and geographical conditions and a rich soil. Therefore so far the community mostly capitalized on production of valuable and high quality fruit. However there is still a potential to further develop fruit value chain, because the community hardly has any fruit value chain related infrastructure and cannot fully benefit from the fruit that is produced.

With a score of 26, the dairy sector related resources are the most underutilized. This may be explained with the natural and geographic conditions of the community, as most of the land area of the community involves forests and orchards and there are not enough grasslands and pastures available in the community to serve as a sufficient fodder base for the animals in case community members decide to further develop this sector.

## 5. ENABLING ENVIRONMENT

A very important factor for community development and consequently a focus point of the community competitiveness assessment is the environment. Enabling environment is an overarching factor that involves a set of broad issues which directly influence all aspects of community development. The factors assessed by our model involve five main indicators that assess the environment from different specific perspectives relevant to the ARDI program. These factors involve:

- Willingness of community members and local officials to commit and invest resources (time and money) in community development.
- Willingness of community members to cooperate with one another towards common gain and development.
- Coverage of the community by other development projects/initiatives.
- Linkage of community with existent (business) support structures, both public and private.
- Position of the community to serve surrounding communities

These factors are assessed by focus group members on a scale of one to five where one is the worst score and “five” the best. The total maximum score on enabling environment is 100. Communities that score high on these features are considered having enabling environment on the features that are of crucial importance for the ARDI program. Moreover these factors all have certain weights which to some degree stress the importance of each specific factor to the program. The following table presents the scores of Mets Ayrum in relation to the mentioned indicators and the total weighted score of the community regarding enabling environment.

**Table 6** Mets Ayrum’s Enabling Environment

Indicators	Score (1-5)	Weight	Weighted Score
Willingness of community members and officials to invest and activity participate in the program	3	6	18
Willingness of community members to cooperate towards common gain and development	4	4	16
Coverage of the community by other development projects/initiatives.	2	1	2
Linkage of community with existent (business) support structures	3	1	3
Position of the community to serve surrounding communities	4	8	32
<b>Total Score Enabling Environment</b>			<b><u>71</u></b>

Source: CCA Workshop Data - Heifer Armenia Calculations

The total score of Mets Ayrum on enabling environment is 71. The highest score (32) involved the position of the community to serve as a community cluster and thus to contribute to the development of nearby communities as well. The second highest score (18) of the community in this area relates to the motivation of the community to invest resources and actively participate in the program. This was also made obvious during community assessment sessions and focus group discussions as community members participated very actively in these meetings as focus group members and observers.

Mets Ayrum scores 16 regarding the willingness of community members to cooperate towards common gain and development. The ability to work with each other is important in case cooperative approaches such as milk producer or fruit processing cooperatives are to be established in the community. The community has limited links to existent (business) support structures and there are currently very few other development programs being implemented in the community.

## 6. CONCLUSIONS

Mets Ayrum is one of the communities located in Alaverdi region of Lori Marz of Armenia. The community houses 1154 residents of which the vast majority is mainly involved in animal husbandry and fruit production, followed by beekeeping activities. Horticulture in Mets Ayrum is providing the main income source to the households, after the community small farmers decided to switch to fruit from grains production.

The total competitiveness assessment score of Mets Ayrum was 113. In general, the community scored relatively high on community resources and enabling environment and relatively low on the resource utilization. Regarding general community resources, the community among others scored high on community education level and community vitality which relates to the relatively large population of young individuals that can get involved and contribute to the development of the community.

In terms of sector or value chain specific resources Mets Ayrum scored the highest on fruit sector capacity (25) which involved relatively good climate and geographical conditions as well as rich soil, suitable for high quality fruit production. Dairy and Tourism sectors scored relatively low with respective scores of 20 and 23. Dairy sector related capacities scored low due to high dependence on climate and geographical conditions as a small natural fodder base exists for the animals. Taking into account the resources of the community regarding tourism, this sector can also have potential for contribution to Mets Ayrum's development.

With regard to resource utilization; similar to the surrounding communities in the region, utilization of resources was the lowest in the tourism/hospitality sector as there are hardly any professional tourism services offered. The second most underutilized sector of the community was the dairy sector due to limited resources and no existing infrastructures. The lack of sector related infrastructure such as collection/consolidation points in the community and organized sells of raw milk are the factors hampering sector growth.

Mets Ayrum scored relatively high on enabling environment. Though the community has relatively limited links with existent business support structures and is not sufficiently covered by development organizations, the community is very well positioned to serve as a cluster center, as it is located very close to the highway, which could connect surrounding communities with the regional centers such as Akhtala and Alaverdi. Most importantly the community is situated very close to Armenian Georgian boarder and can serve as a collection and consolidation center for farmers from nearby communities, taking their production to the Georgian markets. The position of the community to serve surrounding communities has a large importance to ARDI program as the potential impact of the investments made by the program in a community is very much dependent on the ability of the community to serve surrounding communities and contribute to the development of these communities as well.

## 7. ANNEX 1: APPRAISAL APPROACH

<b>Community Resources</b>	
<b>Indicator</b>	<b>Appraisal Measures</b>
<b>General Community Capacity</b>	
<b>Community Educational level</b>	Level of education and agricultural targeting of education as percentage of population with Secondary professional and Higher education on a scale of 1-5 where [0-5%=1] – [5-10%=2] – [10-20%=3] [20-40%=4] – [40%+=5]
<b>Community vitality</b> (number of people aged 15-29/community population)	Number of people aged 15-29/community population) on a scale of 1-5 where [0-5%=1] – [5-10%=2] – [10-20%=3] [20-40%=4] – [40%+=5]
<b>Community infrastructure</b> (existence and condition of roads, water, energy sewage etc.)	Existence and condition of infrastructure as water, energy sewage etc.) on a scale of 1-5 where [no-infrastructure=1] – [inadequate infrastructure=2] – [Usable quality infrastructure=3] – [good quality infrastructure=4] – [excellent infrastructure=5]
<b>Community Natural resources</b> (stone, diamond and other precious metal reserves etc.)	Accumulated score of various resources such as forests, stone, diamond and other precious metal reserves etc.) on a scale of 1-5 where [no resources =1] – [forest and water=1] – [Stone mines=1] – [Precious metals=1] – [fossil fuel reserves as coal=1]
<b>Dairy sector capacity</b>	
<b>Milk Production</b>	(Milk production/per capita) on scale of 1-5 where [0-0.2=1] – [0.21-0.4=2] – [0.41-0.6=3] [0.61-0.8=4] – [0.81+=5]
<b>Milk Productivity</b>	(Milk production/animal head ratio etc.) on scale of 1-5 where [0 - 1=1] – [1 - 1.5 =2] – [1.5-2=3] [2.1—2.5=4] – [2.5+=5]
<b>Fodder Availability</b>	(Animal/pasture ratio on scale of 1-5 where [0 - 1=1] – [1- 2 =2] – [2-3=3] [3-4=4] – [4+=5]
<b>Dairy sector related experience and infrastructure</b>	Accumulated score of various resources as educate people and people with professional experience on scale of 1-5 [Milk technicians =1] – [Vets =1] – [Experience in the sector=1] [Consolidation units=1] – [processing plants=1]
<b>Fruits sector capacity</b>	
<b>Ability to produce quality fruit</b>	Quantity of quality fruit production in tons per capita on scale of 1-5 where [0 - 1=1] – [1- 1.5

	=2] – [1.5-2=3] [2.1—2.5=4] – [2.5+=5]
<b>Fruit quality</b>	Share of high quality fruit of the total fruit production scale on a scale of 1-5 where [0-10%=1] – [ 10-20%=2] – [20-40%=3] [40-80%=4] – [80-100%=5]
<b>Existence of Fruit infrastructure</b>	Hail centers and consolidation units etc. on scale of 1-5 in terms of perceptual coverage [0-10%=1] – [ 10-20%=2] – [20-40%=3] [40-80%=4] – [80-100%=5]
<b>Fruit sector related experience and knowledge</b>	Existence of educated people and people with professional experience in this sector including landscape experts etc.
<b>Tourism Sector Capacity</b>	
Tourism related resources as natural, cultural etc.	Existence of attractive natural environments, culinary specialties, hospitality of the people etc. on scale of 1-5.
Current tourist visits to the community	Number of visitors visiting the community annually (international and locals) on scale of 1-5 where [0 - 10=1] – [ 10 - 100 =2] – [100-200=3] [200-400=4] – [400+=5]
Existence of tourism infrastructure (B&Bs, restaurants, spas etc.)	Existence of B&Bs, hotels, restaurants, spas etc. on scale of 1-5 where existence of all different services is one extra point so only B&B and or hotel =1 points, Restaurants = 1 points, Spas =1 points, leisure possibilities/night life =1 and if all of these points exists 5 points.
Existence of tourism related experience and knowledge	Previous formal and informal experience with tourism service delivery on a scale of 1-5 where only informal hospitality is 1, informal paid hospitality is 2, formal experience as registered business is 3, formal with established links to local tour operators is 4 and formal with established links with international tour operators is 5.

<b>Resource Utilization</b>	
<b>Indicator</b>	<b>Appraisal Measures</b>
<b>Dairy Sector</b>	
Utilization of fodder base	Ratio of number of animals divided by the existent pasture and grassland – minus 1.8 On a scale of 1-5 where [0 – 0.5=5] – [ 0.5- 1 =4] – [2-3=3] [3-4=2] – [4+=1]

Milk collection level (production/collection on a scale of 1-5)	Raw milk production and regular collection ratio in percentage on a scale of 1-5 where [0-10%=1] – [10-20%=2] – [20-40%=3] [40-80%=4] – [80-100%=5]
Milk Productivity	Milk productivity compared to maximum productivity of Caucasian Grey (local breed of cows in Armenia which is 3.5. On a scale of 1-5 where [0 – 0.2=1] – [0.2- 0.5 =2] – [0.5-0.8=3] [0.8-1=4] – [1+=5]
Overall dairy sector resource utilization (on scale of 1-5)	Independents expert evaluation of various components of influence to sector capacity and its utilization.
<b>Fruits Sector Capacity</b>	
Utilization of quality production capacity	Percentage of quality production compared to actual production of fruits on a scale of 1-5 where [0-10%=1] – [10-20%=2] – [20-40%=3] [40-80%=4] – [80-100%=5]
Current sells of quality fruit production	Percentage of quality production sells compared to actual production of high quality fruits on a scale of 1-5 where [0-10%=1] – [10-20%=2] – [20-40%=3] - [40-80%=4] – [80-100%=5]
Professional Fruit processing	Professional (of farm) processing of fruit in the community as drying, juicing etc. where [0-10%=1] – [10-20%=2] – [20-40%=3] [40-80%=4] – [80-100%=5]
Overall fruit sector resource utilization	Independents expert evaluation of various components of influence to sector capacity and its utilization.
<b>Tourism Sector Capacity</b>	
Use of natural, cultural and other resources for community development.	Regularity of tourist visits to the natural cultural and other resources of the community where very rare=1, rare 2, occasionally =3, often is 4 and very often is 5.
Revenue generation through hospitality services (as B&Bs, restaurants, etc. )	Contribution of tourism to community income generation on a scale of 1-5 where [0-10%=1] – [10-20%=2] – [20-40%=3] - [40-80%=4] – [80-100%=5]
Professional use of tourism related Knowledge and HR capacity	Number of people working and utilizing their tourism related experience in this sector as percentage of total community population where [0-10%=1] – [10-20%=2] – [20-40%=3] - [40-80%=4] – [80-100%=5]
Overall Tourism sector resource utilization	Independents expert evaluation of various components of influence to sector capacity and its utilization.

## **8. ANNEX 2: INFRASTRUCTURAL INVENTORY (Armenian)**



**ARDI** is a 5-year program funded by the US Agency for International Development. Launched in September 2013; the program aims to increase rural employment by tackling constraints to rural economic development of communities in the Syunik, Vayots Dzor and Lori Marzes (provinces) of Armenia. The program will support interventions in three main rural economic sectors/Value Chains involving Dairy Processing, Fruit Processing and Rural Tourism.