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# ADVANCED RURAL DEVELOPMENT INITIATIVE (ARDI)

## COMMUNITY COMPETITIVENESS ASSESSMENT METS PARNI



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## INTRODUCTION

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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 often focused on community deficiencies and less on community strengths which often reduced the 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 produce more sustainable and effective outcomes.

With this in mind, Heifer Armenia (HA) 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) 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

1 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.

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 Parni community.

## 2. COMMUNITY PROFILE

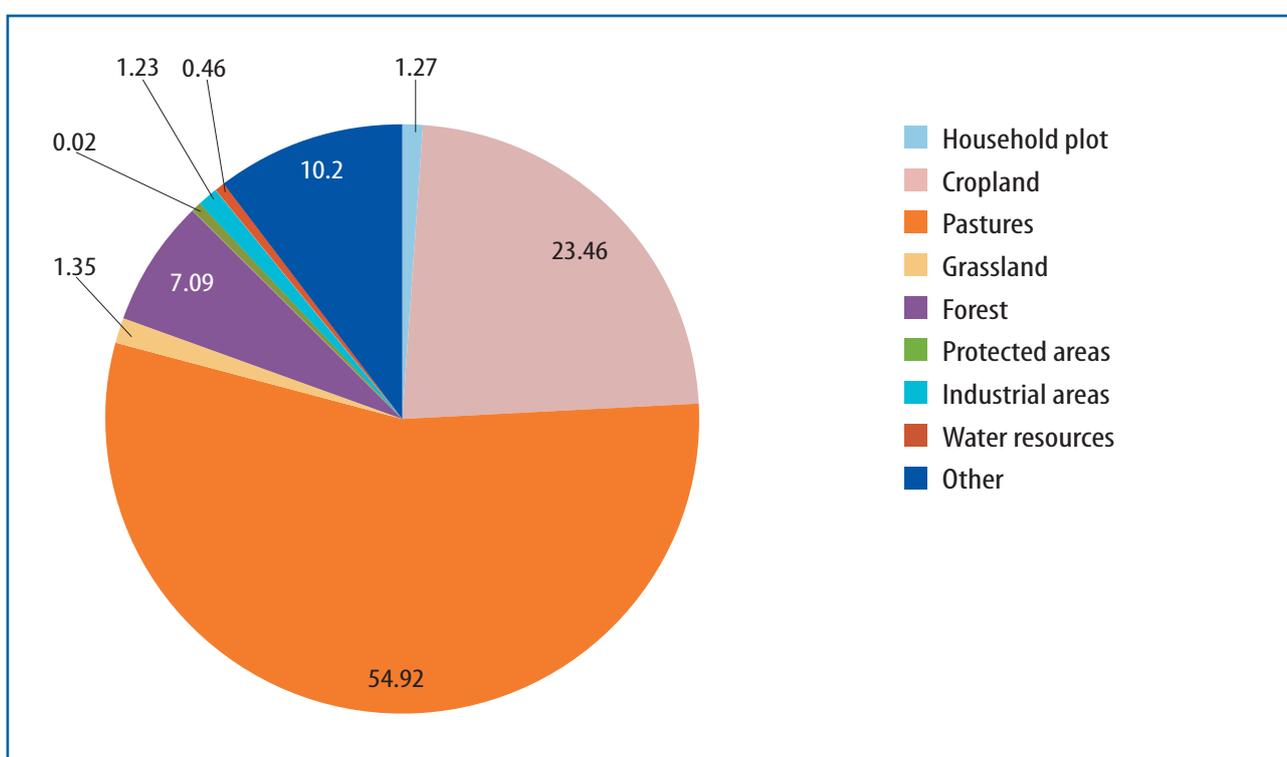
Mets Parni is located in the very green Lori province not far from Spitak and 37km from Vanadzor. The community is positioned close to the Gyumri-Vanadzor highway and Yerevan-Tbilisi railway. Mets Parni is located on an altitude of 1680 meters above sea level. The neighboring communities are Katnajur (2 km), Tsaghkaber (2 km), Shirakamut (6 km), Saralanj (4 km), Hartagyugh (4km) and Lusaghbyur (8 km).

Mets Parni has a rich history and is surrounded by numerous historical monuments. Previously the community was named Bekyand. Mets Parni has a relatively mild climate.

### 2.1. Community Territory

The total surface area of Mets Parni covers an area of 6635.61 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 Parni Community Land Register*

A dominant share of Mets Parni's territory involves pastures which make up about 60 percent of the total community territory. The remaining two large land classifications are croplands and forests taking about 23.5 and 7 percent or 1557 and 470 ha of the land respectfully. The make-up of Mets Parni's territory in particular the large share of pastures and croplands have significant influence on the Mets Parni's development potential and economic activity.

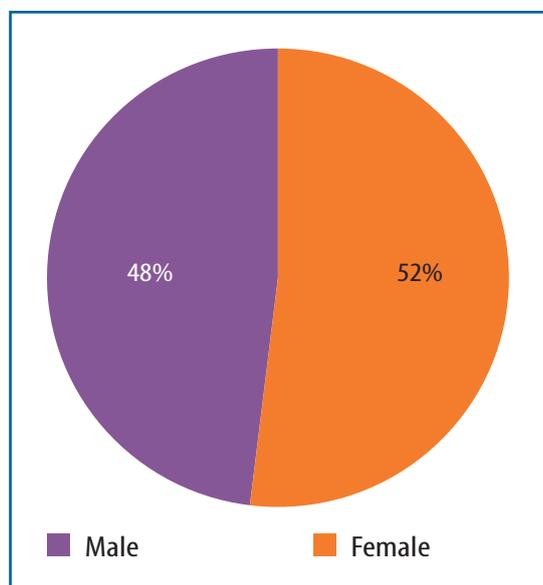
In that regard, it is important to notice that on average 1.89 ha of pasture or grass land is needed for provision of adequate fodder base for one cow in Armenia (taking into account average yield of one ha of pasture/grass land).<sup>2</sup> Mets Parni has an animal to pasture ratio of 5.4 ha which is well above the minimum

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

required land area per animal. This points towards Mets Parni’s potential to supply fodder for a larger number of animals in case of increased livestock headcount in the community.

## 2.2. Demographic Profile

Currently Mets Parni houses 653 families and the community has a de facto population of 2210 residents of which 1050 are male and 1160 are female.<sup>3</sup> If we take into account the population of the community in 2001, which was 2171, the total population of Mets Parni has remained stable during the previous decade.



**Figure 2** Gender Classification of the community

*Source: CCA Workshop Data - Heifer Armenia Calculations*

About 17 percent or 372 people of Mets Parni’s 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. The 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
Mets Parni	143 - 6.5%	108 - 5%	121 - 5.5%
Lori Marz	9916 - 9%	7297 - 7%	6040 - 6%

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

As presented in the table above, the share of all three age groups are below Marz level average for rural population, specifically the 15-19 age group. Though the statistic is not that impressive, but the overall number of young individuals (372 people) in Mets Parni community will allow planning and implementation of youth specific (long term and sustainable) interventions by the ARDI program.

<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 livestock breeding and horticulture are the main economic sectors of Mets Parni community. Community members may have small irregular employment/income from other sources/sectors which are not covered in this section.

As presented in Table 2, the total average output of Mets Parni in the livestock breeding sector is 997.5 tons of milk per year. This is about 451 liters of milk production per capita. The total sale of dairy products is around 70 percent of milk production. This should result in an overall monetary output of about 139.6 mln AMD per year generated by the sales of dairy products. Community members are producing also relevantly small amount of meat (55 tons) and 75% of the produced meat is sold, tentatively generating about AMD 70.1 mln per year.

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

Economic Sectors	Annual Agricultural output	Percentage Sold	Monetary Output (mln AMD)*
Livestock breeding	Milk 997.5 t	70%	139.6
	Meat 55 t	75%	70.1
Beekeeping	6 t	90%	16.2
Horticulture	Fruit 156.6 t (apples 138.6 t, pears 7.2 t, plums 10.8)	0%	0
	Barley 600 t	80%	67.2
	Wheat 2000 t	90%	234
	Vegetables 3100 t (beets 100 t, potatoes 3000 t)	80%**	220.5***

\*The output calculations are based on average (retail) sales prices of specific products and reflect actual prices. AMD prices per kg/l: milk 200, beef 1700, honey 3,000, apples 100, pears 100, plums 200, barley 140, wheat 130, potatoes 120 and beets 45).

\*\* This is the average percentage of all sold vegetables percentages (beets 100%, potatoes 60%).

\*\*\* The calculation is done on the sold percentage of each type of the vegetables.

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

The community also has about 600 beehives which altogether produce about 6 tons of honey annually. Honey is one of the products that community members sell relatively easy as about 90 percent of the output reaches markets. This generates a monetary output of about AMD 16.2 mln per year for the community.

Mets Parni produces a large quantity of vegetables which altogether adds up to 3100 tons of vegetables production annually. The main types of produced vegetables in Mets Parni are beets and potatoes with 100 and 3000 tons production of each type respectively. The production is easily sold. Community members are also producing some fruit but these are only for household use and none of them reach the market.

Having in mind the considerable per head production volumes in milk sector it is becoming obvious that this sector may have significant potential for development in Mets Parni. More in depth value chain analysis will help us understand the specifics of this value chain in Mets Parni and their potential to boost economic development in the community and surroundings.

To identify possible alternative economic development direction, focus group members were also requested to highlight possible alternative economic sectors for their community which currently are not tapped into adequately. These sectors provide further opportunities for the community to capitalize existing re-

sources, boost entrepreneurship and eventually generate higher community output. The following sectors were identified as high potential alternative sectors by community members:

- Aviculture
- Sheep breeding
- Fish Farming
- Eco Tourism

Eco tourism was identified as high potential alternative sector. The Trchkan Waterfall which is located in Mets Parni administrative area, Mets Parni church and Saint Hovhannes Chapel is attracting about 2200 tourists per year from which about 20% are from outside of Armenia. In response community members indicated to see potential for enhanced sheep breeding, fish farming and aviculture.

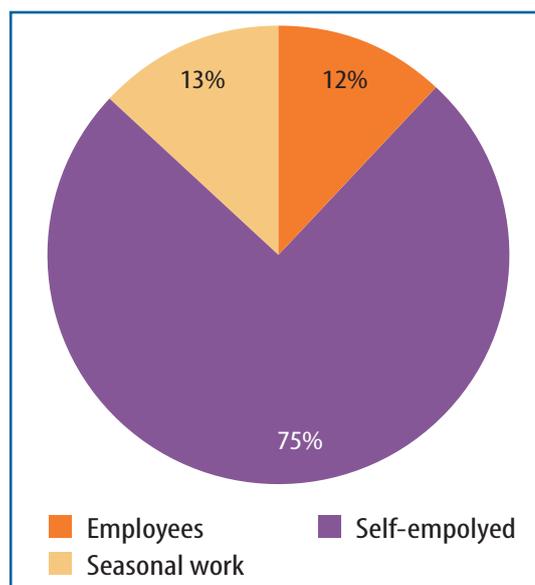
## 2.4. Labor Force and Employment

Currently Mets Parni has a working age population of 1450 people (de facto population between 16 and pension age 64). 172 individuals or only 12 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.

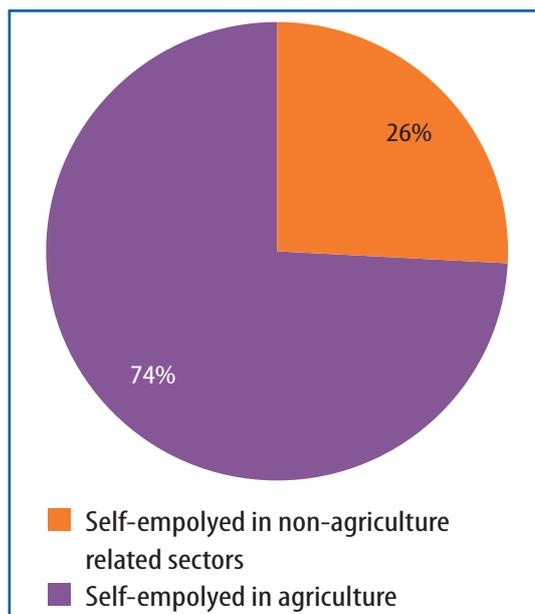
The remaining 13 percent of the working age population is engaged in seasonal work which mainly involves seasonal work outside of Armenia. The community is therefore mainly reliant on self-employment and entrepreneurship. As illustrated in the figure above, 1082 individuals or 75 percent of Mets Parni’s working age population is self-employed. Of this group 282 individuals are occupied in non-agriculture related and 800 are self-employed in agriculture related fields of occupation (See Figure 4).

Vast majority of the community population is therefore self-employed in the agriculture sector. Yet, results of community consultations reveal that only a small share of the self-employed in agriculture have sufficient access to buyers in terms of regular sales with appropriate volumes and so the remaining majority is often involved in subsistence farming. The current excess agricultural production capacity provides Mets Parni with great potential for economic development in case the community is able to breakthrough barriers to market entry and realize market penetration.

In terms of Education, around 64 percent of the population in Mets Parni or 1420 people have completed secondary education, and 22 percent or 481 people completed secondary professional (college) and or university education.



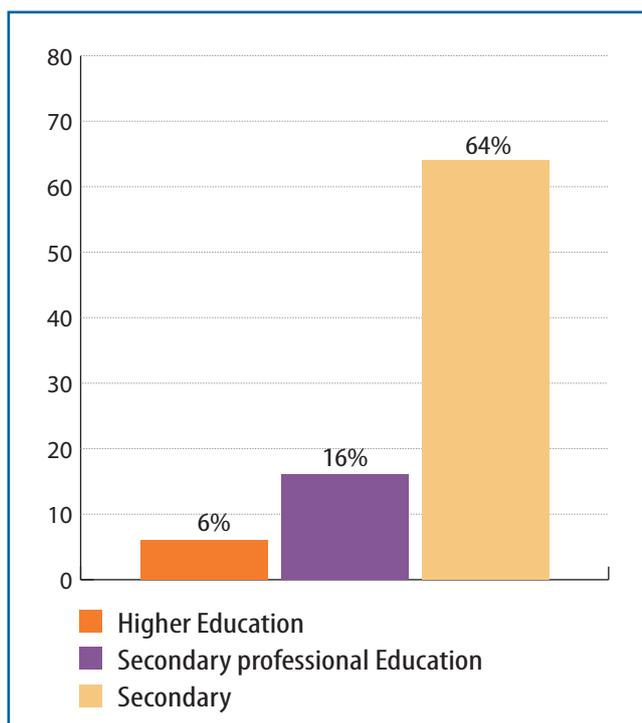
**Figure 3** Occupation of Working Age population  
**Source:** CCA Workshop Data - Heifer Armenia Calculations



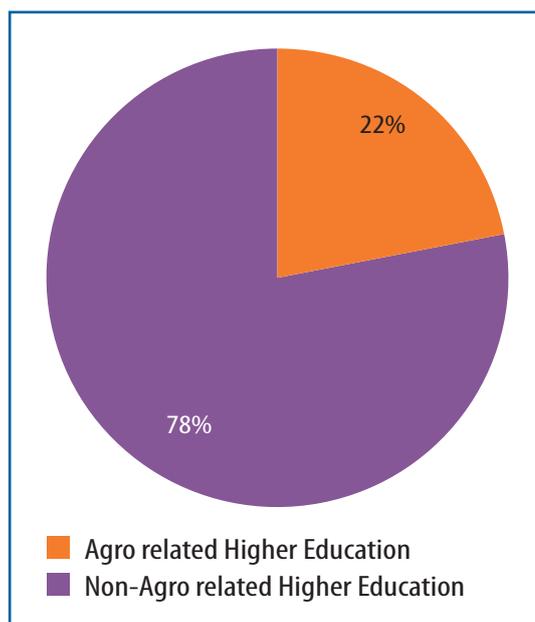
**Figure 4** Direction of Self Employment  
**Source:** CCA Workshop Data - Heifer Armenia Calculations

Compared to country educational levels Mets Parni lies below country level average in terms of higher education levels.<sup>5</sup>

**Figure 5** Community Education level



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



*Source: CCA Workshop Data - Heifer Armenia calculations*

As presented in the figures 5 and 6, Mets Parni has considerable human resources in both agriculture related and non-agriculture related fields. Of the population with professional education (secondary professional education and or higher education) about 22 percent has agriculture related education and the remaining 78 percent is educated in non-agriculture related fields. People who have non-agriculture related education are mainly educated in the fields engineering and finance. The latter is particularly important for setting up/development of businesses and/or rural cooperatives where adequate financial management is crucial.

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

Non-agricultural related	Number of Experts	Agricultural fields	Number of Experts
Finance	95	(Milk) technicians	3
Engineering	3	Engineering	1
Management	0	Management	0
Tourism	0	Veterinarian	60
Other	277	Other	42

*Source: CCA Workshop Data - Heifer Armenia calculations*

The community has access to a quite large number of veterinarians. With regard to agriculture related education and expertise, there are 3 (milk) technicians and 1 engineer in the community. Specifically the abundance of veterinary resources is significantly important for the development of a healthy cattle and animal husbandry in the community.

<sup>5</sup> National Statistical Service of RA (2012), Statistical Yearbook of Armenia, 2012, available at: [www.armstat.am](http://www.armstat.am)

## 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 threats that currently threaten the environment of the community and evaluate the impact level of these threats on Mets Parni's development. Focus group members highlighted the following issues as the main factors threatening the environment of the Mets Parni:

- Climate, as large risks of hail
- Frostbitten
- Drought

As the main issue threatening the natural environment of the community, focus group members mentioned the large risks of hail and the fact that there are just two hail stations in Mets Parni, but these cover only 160-200 ha of community arable lands, they need hail stations for the other 1000 ha as well.

The second environmental issue relates to the severe climate in Lori region. Late snowfall and freezing temperatures hit farmers of Mets Parni community hard. Sharp temperature drop, hail and heavy snow cause huge damage to the community's agricultural sector. Trees which are already in blossom are being affected by the onslaught of the cold front. The traditional protective measures are often useless against nature.

From time to time there is a risk of drought in Mets Parni community due to semi-arid climatic conditions and poor conditions of irrigation system.

### 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. These target value chains involve 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 ARDI specific investments in a community or community cluster.

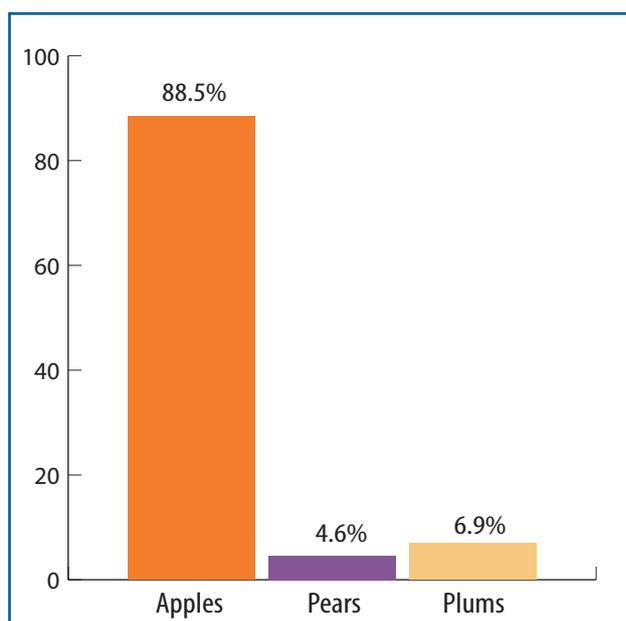
The assessments also involve evaluation of community infrastructural resources. This will include inventories of community infrastructure in terms of existence and condition of community infrastructure such as drinking and irrigation water systems, community and intra community roads, educational cultural 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 community is provided in the ANNEX 2.

#### 3.1. Fruits Sector Capacity

As discussed already in Mets Parni's Economic profile, fruit production volumes in Mets Parni are relatively small. The average fruit production annually reaches about 156.6 tons of fruit and which is essential to mention community members are not selling fruits at all. The main types of produced fruits in Mets Parni are apples, pears and plums with 138.6, 7.2 and 10.8 tons of production of each type respectively.

**Figure 7** Types of Fruit Produced

*Source: CCA Workshop Data - Heifer Armenia Calculations*



Members of the focus group indicate the following issue as the main problem that hamper Mets Parni's inhabitants to produce more and sell their produce:

- Poor conditions of irrigation system

The only reason which is hindering Mets Parni's residents to produce more fruits is the poor conditions of irrigation system which was almost destroyed by the massive earthquake in 1988.

According to community members Mets Parni has always mainly concentrated on animal husbandry rather than on fruit production. As a consequence community members also do not have vast experience or specific knowledge of the fruit value chain. Lack of related experience and knowledge is therefore another reason that hampers fruit production in the community.

#### 3.2. Dairy sector capacity

As illustrated in the economic profile of the community, livestock breeding is currently the main economic sector of Mets Parni. Currently many small holder farmers exist in Mets Parni who primarily are active in this value chain. Community members have about 665 milking cows and tentatively produce about 55 tons of meat worth about AMD 70.1 mln annually. Sales of raw milk is quite impressive and about 70 percent of the produced milk is sold as raw milk generating AMD 139.6 mln annually (retail prices, please see Table 2).

The remaining part of the milk is processed by the households into cheese and other dairy products and is sold on an irregular basis. The community has more than enough fodder bases for the existent cattle headcount and so fodder does not impose a problem to production.

Availability of veterinary services does not hamper the operations of farmers in this community as the community has big amount of veterinaries that cover the need for veterinary medical services of the entire community.

In terms of sector related infrastructure, there are currently no milk collection/cooling units in the community.

To this end, the community has bigger potential to produce milk, however, the lack of value chain related infrastructure such as consolidation units hamper milk production and sales by the community.

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

Mets Parni currently attracts about 2200 tourists annually including Armenians from Diaspora and foreigners next to a large group of locals who come mostly to visit Surb Hovhannes Chapel and to see Trchkan waterfall. These are mainly day tourists who do not spend more time in the area. Tourists mainly hear about Mets Parni from word of mouth, as there are no professional tour agencies that promote the community and organize tours to Mets Parni and its surroundings.

Currently there are no B&Bs or any other accommodation services offered in Mets Parni. There are however two hotels in a 20 km range of the community in Spitak.

Mets Parni has vast natural resources with touristic value as it is located next to Pambak river and Trchkan waterfall in an area with plenty of forests and beautiful landscape. The following are some of the main natural resources of the community with a touristic value:

- Trchkan waterfall
- Surrounding mountains and forests
- Pambak river

Next to natural resources the community also has various cultural heritages. The following are the main cultural resources of the community:

- Surb Hovhannes Chapel
- Mets Parni Church

As products or features that can be featured as Mets Parni's local specialties or interesting events with touristic value, community members highlighted the Vardavar holiday which is one of the most favorable, joyful and noteworthy holidays in Armenia.

Community members have previous informal experience regarding provision of accommodation (B&B) services to relatively large groups of visitors. But there are currently 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:

- Poor road conditions
- Lack of houses with the minimum required living conditions

However, despite the mentioned issues, community members believe that Mets Parni has a very large potential for further development of tourism in the community and this can serve as an additional/alternative economic sector and income source for community members.

### 3.4. Score of Community Resources

This sub section presents the quantitative summary of Mets Parni'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 Parni community regarding various general and value chain specific resources.

The maximum possible score on community resources is 200. The scoring is done based on objective 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.

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

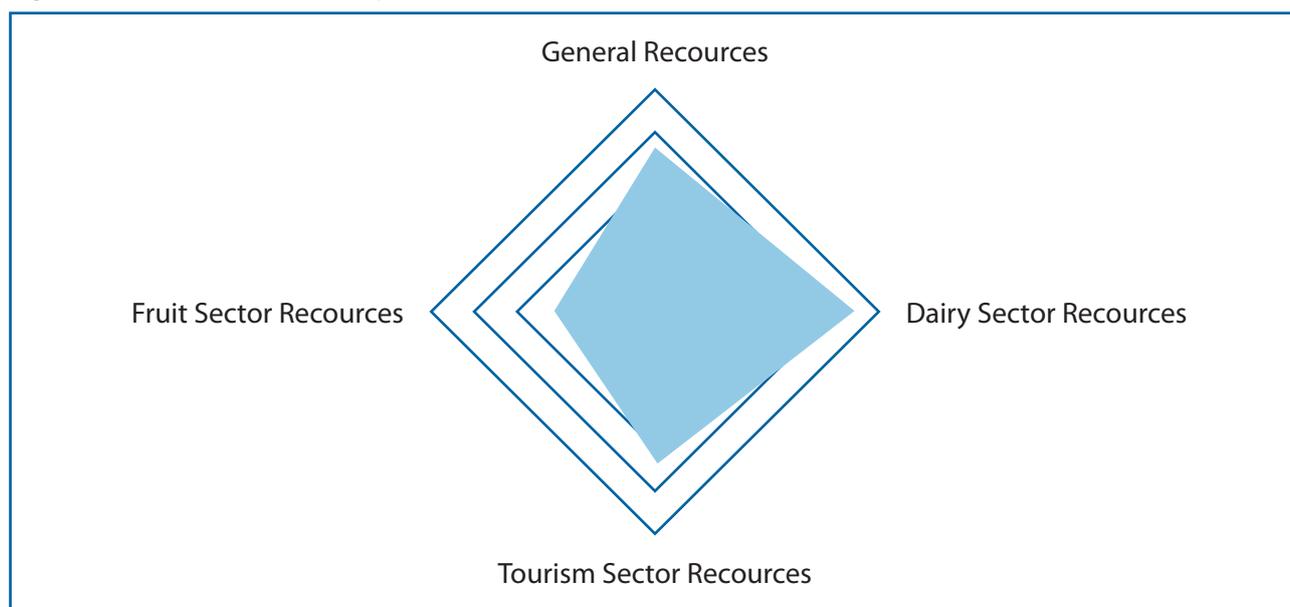
Indicator	Score	Weight	Weighted Score
<b>General Community Capacity</b>			
<b>Community Educational level</b> (level of education and agricultural targeting of education) on a scale of 1-5	4	3	12
<b>Community vitality</b> (number of people aged 15-29/community population) on a scale of 1-5	3	3	9
<b>Community infrastructure</b> (existence and condition of roads, water, energy sewage etc.) on a scale of 1-5	2	2	4
<b>Community Natural resources</b> (stone, diamond and other precious metal reserves etc.) on a scale of 1-5	2	2	4
<b>Total Score General Community capacity</b>			<b>29</b>
<b>Dairy sector capacity</b>			
<b>Milk Production</b> (Milk production/per capita) on scale of 1-5 =0.46	4	1	4
<b>Milk Productivity</b> (Milk production/animal head ratio etc) = 1.7 on scale of 1-5	3	2	6
<b>Fodder Availability</b> (Animal/pasture) on scale of 1-5	5	3	15
<b>Dairy sector related experience and infrastructure</b> (on scale of 1-5)	3	4	12
<b>Total Score Dairy Sector Capacity</b>			<b>37</b>
<b>Fruits sector capacity</b>			
<b>Ability to produce quality fruit</b> (0.001) (on scale of 1-5)	1	1	1
<b>Fruit quality</b> (scale 1-5)	2	3	6
<b>Existence of Fruit infrastructure</b> (hail centers etc.) on scale of 1-5	1	2	2
<b>Fruit sector related experience and knowledge</b> (on scale of 1-5)	1	4	4
<b>Total Score Fruit Sector Capacity</b>			<b>13</b>

Tourism Sector Capacity			
Tourism related resources as natural, cultural etc. on scale of 1-5.)	3	3	9
Current tourist visits to the community (on scale of 1-5)	3	2	6
Existence of tourism infrastructure (B&Bs, restaurants, spas etc. on scale of 1-5)	2	3	6
Existence of tourism related experience and knowledge (on scale of 1-5)	1	2	2
<b>Total Score Tourism Sector Capacity</b>			<b>24</b>
<b>Total Score Community Resources</b>			<b>103</b>

*Source: CCA Workshop Data - Heifer Armenia Calculations*

Mets Parni scores relatively high on general resources and dairy sector capacity with a score of 29 and 37 respectively. The third highest score of the community involve tourism related capacities and resources which was 24. With a weighted score of 13 the fruit sector related capacities of the community scored the lowest. The total weighted score of Mets Parni on community resources is 103. The Figure 8 presents a visual illustration of the community resources in the four indicated areas.

**Figure 8** Mets Parni 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 Parni 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 Parni Community Resources Utilization

Indictor	Score	Weight	Weighted Score
<b>Dairy sector capacity</b>			
Utilization of fodder base (Animal/pasture ratio)	1	3	3
Milk collection level (production/collection on a scale of 1-5)	4	4	16
Community milk Productivity 0.48 (on a scale of 1-5)	2	1	2
Overall dairy sector resource utilization (on scale of 1-5)*	3	2	6
<b>Total Dairy Sector (Max 50)</b>			<b>27</b>
<b>Fruits sector capacity</b>			
Utilization of quality production capacity (on a scale of 1-5)	2	3	6
Current sales of quality fruit production (on a scale of 1-5)	1	3	3
Professional Fruit processing (on a scale of 1-5)	1	2	2
Overall fruit sector resource utilization (on scale of 1-5)	4	2	8
<b>Total Fruit Sector (Max 50)</b>			<b>19</b>
<b>Tourism sector capacity</b>			
Use of natural, cultural and other resources for community development of 1-5.)	5	4	20
Revenue generation through hospitality services (as B&Bs, restaurants, etc. on scale of 1-5)	1	3	3
Professional use of tourism related Knowledge and HR capacity (on scale of 1-5)	1	2	2
Overall Tourism sector resource utilization (on a scale of 1-5)	1	1	1
<b>Total Tourism Sector (Max 50)</b>			<b>23</b>
<b>Total Score Resource Utilization</b>			<b>69</b>

*\* 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, the following factors were taken into account: knowledge and experience of the community in this specific sector, willingness of the community to invest in the sector and other similar factors.*

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

Mets Parni had a total resource utilization score of 69 out of 150. The community scored the lowest regarding fruit sector resource utilization as there is currently hardly any economic activity in this sector. As discussed in section 3.1, the capacities of Mets Parni regarding high quality fruit production are low as the community produces just 156.6 tons of fruit and they use it for their own needs.

With a weighted score of 23, the tourism sector scored second regarding resource utilization. There are about 2200 tourists visiting Mets Parni community annually but community members are not generating any income from this sector. Natural, cultural and other resources of the community with touristic value are not being utilized for commercial purposes.

With a score of 27, dairy sector had highest score regarding resource utilization. Currently scores on milk collection levels are very high but there are no milk collection / cooling units in the community. If the necessary conditions exist, next to potential for increased production and productivity, there is enough fodder base in the community which still can be exploited for animal husbandry and milk production.

## 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:

- The 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 Parni community in relation to the mentioned indicators and the total weighted score of the community regarding enabling environment.

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

*Source:* CCA Workshop Data - Heifer Armenia Calculations

Indicators	Score (1-5)	Weight	Weighted Score
Willingness of community members and officials to invest and activity participate in the program	5	6	30
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	2	1	2
Position of the community to serve surrounding communities	5	8	40
<b>Total Score Enabling Environment</b>			<b>90</b>

The total score of Mets Parni on enabling environment is 90. The community has a favorable (geographic) location which will enable the community to serve as a community cluster center and reach the surrounding communities incase investments are made in the framework of the ARDI program. This is of crucial importance to the program and therefore has a high weight in the assessment. Moreover, the community has a very motivated population who are willing to invest resources and actively participate in the program.

The next highest score of the community was 16 and involved 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 existent (business) support structures and there is currently only one other development program being implemented in the community that addresses water related problems. Mets Parni involved in other large agricultural programs such as the Community Agricultural Resource Management and Competitiveness Project (CARMAC).

## 6. CONCLUSIONS

Mets Parni is a village located near the Pambak river and surrounded by mountains and forests. The community houses 2210 residents which mainly are involved in Animal husbandry, followed by horticulture and to some degree beekeeping.

The total competitiveness assessment score of Mets Parni was 124. In terms of resources, Mets Parni scored 103 from a maximum of 200. In general, the community scored relatively high on community resources and lower on community resources utilization. Regarding general community resources, the community among others scored high on community vitality and community education level. Community vitality 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 Parni scored the highest on dairy sector capacity (37) which involved relatively high amount of the produced milk in the community. Tourism sector related capacities of the community followed the Dairy sector and the fruit sector related capacities of the community scored the lowest.

With regard to resource utilization; utilization of resources was the lowest in the fruit sector as there is hardly any economic activity in this sector. The second most under-utilized sector was tourism sector as there huge untapped potential for generating more income and there are hardly any professional tourism services offered by the community in this sector.

The dairy sector had the highest score regarding resource utilization. The lack of sector related infrastructure such as collection/consolidation points in the community and organized sales of raw milk are some of the main factors hampering sector growth. This provides the community with a strong resources base that can be utilized to a much larger degree.

Taking into account the resources of the community regarding animal husbandry, this sector have strong potential for contribution to Mets Parni's development. Besides the resources of the community regarding tourism are also quite huge and therefore this sector can also have rather big potential to develop. Mets Parni 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 community cluster. The position of the community to serve surrounding communities has a large importance to ARDI program as the potential impact of the direct investments made by the program into 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.

The community also scored relatively high on factors related to the willingness of community members to cooperate towards common gain and development, and the motivation of the community population to invest resources and actively participate in the program.

## 7. ANNEX 1: APPRAISAL APPROACH

Community Resources	
Indicator	Appraisal Measures
<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]

Fruit sector related experience and knowledge	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)	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	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 sales of quality fruit production	Percentage of quality production sales 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]

<b>Professional Fruit processing</b>	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]
<b>Overall fruit sector resource utilization</b>	Independents expert evaluation of various components of influence to sector capacity and its utilization.
<b>Tourism Sector Capacity</b>	
<b>Use of natural, cultural and other resources for community development.)</b>	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.
<b>Revenue generation through hospitality services (as B&amp;Bs, restaurants, etc.)</b>	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]
<b>Professional use of tourism related Knowledge and HR capacity</b>	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]
<b>Overall Tourism sector resource utilization</b>	Independents expert evaluation of various components of influence to sector capacity and its utilization.

## 8. ANNEX 2: INFRASTRUCTURAL INVENTORY

**Economic infrastructure** – including industrial areas and buildings suitable for the production, storage, processing factories, stores, food service outlets, markets, hotels, guest houses, mines and mining, etc.

Infrastructure	Operating / non operating	Belongs to (private-public)	Production capacity, if applicable.	Inner community / Outside of community (5 km radius)
Sewing factory	Non-operating	Public	N/A	Inner community
Crystal glass factory	Non-operating	Public	N/A	Inner community
Storages- 4	Operating	Private	300 m <sup>2</sup> – 400 m <sup>2</sup>	Inner community
Stores- 6	Operating	Private	One is 30 m <sup>2</sup> , other	Inner community
Food service point	Operating	Private	For 20 people	Inner community

**Transport infrastructure**, including roads (intra and inter), bridges, tunnels, traffic direction, traffic lights, community transport, car service centers, gas stations, etc.

Infrastructure	Operating / non operating	Belongs to (private-public)	Inner community / Outside of community (15 km radius)	Comments
Road	Operating	Public	Inner community	10-12 km, is in bad condition
Road from Mets Parni to Tsaghkaber	Operating	Public	Inner community	3 km, is in bad condition
Road from Mets Parni to Hartaghyugh	Operating	Public	Outside of community	Is in bad condition
Road from Mets Parni to Katnadjour	Operating	Public	Outside of community	Is in bad condition
Bridge	Operating	Public	Inner community	Is in sufficient condition
Road lights	Operating	Private	Inner community	Is in sufficient condition
CNG station	Operating	Private	Inner community	Is in good condition
Petrol station	Non-operating	Private	Inner community	N/A

**Energy infrastructure** – including electrical substations, hydropower stations, network, gasification/natural gas coverage, gas substations, services, etc.

Infrastructure	Operating / non operating	Belongs to (private-public)	Coverage (%)	Comments
Electrical substations-5	Operating	Public	100%	HEN, one is high voltage
Network	Operating	Public	100%	Is in good condition

Gasification	Operating	Public	100%	GAZPROM ARMENIA CJSC
Gas regulation station	Operating	Public	100%	N/A
Gas station-3	Operating	Public	100%	N/A

**Water infrastructure** - including drinking and irrigation water network, sewerage, water drafting stations, drainage systems, water pumping stations, water meters, drainage systems, expansion basins, torrents, etc.

Infrastructure	Operating / non operating	Coverage (%)	Comments
Drinking water network	Operating	100%	Operating from 2014
Irrigation water network	Operating	60%	40% is mound
Water meter	Operating	100%	N/A

**Telecommunications infrastructure** – post office, fixed/landline telephone, mobile, Internet, TV, television towers, and so on.

Infrastructure	Operating / non operating	Coverage (%)	Comments
N/A			

**Waste management infrastructure** – organized waste management, centralized garbage shedding areas, biogas production, etc.

Infrastructure	Operating / non operating	Comments
Centralized garbage shedding site	Operating	Legally assigned

**Geological infrastructure** – hail stations, weather forecast stations and so on.

Infrastructure	Operating / non operating	Comments
Hail stations-2	Operating	N/A

**Management infrastructure** – village administration, police, fire station and so on.

Infrastructure	Operating / non operating	Comments
Village municipality	Operating	Public
Police station	Operating	The officer visits once a week
Fire department	N/A	Will start operating from 2016

**Social infrastructure** – community ambulance, hospitals, schools, kindergartens, gym, community center, museum, library, etc.

Infrastructure	Operating / non operating	Belongs to (private-public)	Comments
Hospital	Operating	Public	Belongs to ministry of health, serves 9 villages
School	Operating	Public	253 pupils
Kinder garden	Operating	Public	Is in a sufficient condition

Library	Operating	Public	N/A
A museum in a room at the school	Operating	Public	Dedicated to M. Melkonyan

**Inactive list of infrastructure**, which can be used for the purposes of program.

Infrastructure	Condition (good, bad, medium)	Availability of other infrastructure				Usage possibility rating (1-5)	Comments
		water	gas	Electricity	Road		
N/A							



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**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.

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