

LOCAL ECONOMIC DEVELOPMENT IN VERIN GETASHEN



Participatory Appraisal of Competitive Advantages (PACA)

Verin Getashen, January-February, 2012

Verin Getashen

Verin Getashen community is located in the marz of Gegharkunik /in Gegharkunik marz (region), on the bank of the river of Argichi, at a distance of **3** km from the town of Martuni. It is **2050** meters above sea level. Verin Getashen is located in **35** km of the regional center, and **120** km away from the capital. The climate is temperately mountainous, with long cold winters and constant snow cover. There are frequent snowstorms. In January the average temperature is - **6** to -**8** degrees. The summer is moderately hot; the average range of July is **17-18** degrees. Annual atmospheric precipitation is **500-600** millimeter.

Natural landscapes are mountain valleys and intermountain meadows.

It has spring water sources, which are used as drinking water.

The amount of solar days in Martuni region, where Verin Getashen is located, has the highest index in Armenia. The annual average number of cloudy days is **16** days and the average number of solar hours is more than **2600** hours/year.

Verin Getashen is electrified and gasified; about **70%** of house-plots have irrigation water. There is no plumbing in the community. Fixed-line phone service and Internet connection are available in the village. The community has two schools, which are in good conditions, with heating system. The community has a kindergarten as well. There are weightlifting, dancing and chess clubs in the House of Culture. Children successfully participate in local and national tournaments. The village has a dispensary, which is in good condition, a pharmacy and a kindergarten.

Brief description of the economy

The basis of the economy of Verin Getashen is traditional agriculture. It has been a milk-cattle farm since the Soviet era, which was engaged in the grain, feed crops, potatoes and tobacco processing.

80% of the population is engaged in farming and cattle breeding, **5%** in the trade. The main part of the youth works abroad in the Russian Federation and Uzbekistan.

The basic branches of agriculture are cattle breeding, sheep breeding, bee-farming, potato farming, and grain production. Horticulture is developed as well; apples and pears are widely grown.



The traditional knowledge and experience in this field, as well as the large area of lands belonging to community, grassland and pastures contribute to the development of agriculture.

The main area of privatized land is **9420** ha, of which **870** ha is cultivated land, pastures - **6355** ha and meadows - **2194** ha.

The village has three groceries and one appliance store, where **8** people work.

The village has **149** units of agricultural equipment and trucks, which are used mainly for their own needs.

Competitive advantages of Verin Getashen

Verin Getashen has a number of competitive advantages, on one part of which the current economy is based on, and the other part is not used. Below are presented the competitive advantages of the community:

Natural resources

- ⇒ most meadows in the region (**2194** ha),
- ⇒ the largest number of solar hours in the RA (**2678** hours, an average in the country - **2400** hours),
- ⇒ pastures are large and diverse (**6355** ha),
- ⇒ irrigation facility (**280** ha of irrigated arable land).

Professional, human resources

- ⇒ people with relatively high output in the agricultural sector share their experience with start-ups,
- ⇒ favour and readiness to innovation,
- ⇒ social activism.

Technological resources

- ⇒ availability of agricultural equipment and trucks (**149** units),
- ⇒ strong traditions of sheep and cattle breeding; the community of Verin Getashen in Martuni region was considered as a traditional center of sheep breeding.



The local team in working process

Analysis of the leading branches of economy in Verin Getashen

When analyzing the economic sectors of the community, it was taken into account, where the majority of the working population is concentrated and where the community's largest income is generated. The factors impacting on the development of industry, as well as existing relationships both within the industry, and out of the sector were assessed. Attention was paid to profitability of sector and labor productivity, compared with rates of other industries and communities (in some cases, the average of the country and regions):

Table 1. The classification of the economy's main sectors of Verin Getashen according to productivity and profitability.

	Sector productivity in comparison with other regions of Armenia is high	Sector productivity in comparison with other regions of Armenia is low
Sector productivity in comparison with other sectors of the community is high	Emmer wheat Pea grained Green pea Linseed/flaxseed Meat (beef, lamb)	Garlic Meat (pork)
Sector productivity in comparison with other sectors of the community is low	Wild strawberry Garden strawberry Currant Potato Milk Honey	Cabbage Wheat Barley

Farming in Verin Getashen

Farming in the community of Verin Getashen has traditional roots. There have been preserved the ruins of a flax oil manufactory built in 20s in the village, which indicates to a widespread cultivation of flax in the region at the beginning of the last century.

During the Soviet period, the community was engaged in production of potato, wheat, barley and tobacco products.

Since the independence of the RA the community continues to grow traditional crops, except tobacco. In recent years, the activities were initiated for growing of new crops: linseed, emmer wheat.

871 hectares of cultivated land are the property of the community. Lands are not in good condition, corrosion level is high.

The average rates of competitive comparison for potato and grain, as well as other plants production in the community of Verin Getashen (cabbage, beech, garlic, linseed, etc.) are presented in Table 2:

Table 2. Competitiveness analysis of the main farming branches in Verin Getashen

Crops	Prolificacy, 1 ha average, ton				
	Verin Ge-tashen	Gegharkunik	Leading marz	RA average	Total ratio
Cabbage	39,7	38,66	Aragatsotn 5154	34,96	32%
Garlic	9,26	9,28	Ararat 21,89	9,81	20%
Potato	21,02	18,01	Ararat 30,38	17,01	48%
Winter wheat	2,82	2,57	Ararat 3,31	2,12	27%
Barley	2,35	2,44	Ararat 2,54	2,01	46%
Emmer wheat	2,48	2,33	Gegharkunik 2,33	1,11	8%
Linseed/ flaxseed	2,39	2,28	Gegharkunik 2,28	1,23	14%
Pea	-	8,56	Gegharkunik 8,56	2,16	52%
Green pea	-	6,0	Gegharkunik 6,04	2,40	7%
Wild strawberry Garden strawberry Currant	-	7,82	Ararat 10,34	4,83	3%

Table 3. Productivity analysis of the main branches of farming in Verin Getashen

		Potato	Wheat	Barley	Cabbage	Emmer wheat	Linseed/ flaxseed	Garlic
1	1 st resulting average yield, kg	21020	2820	2350	39700	2480	2390	9260
2	Average wholesale price for 1kg	150	150	130	50	700	1300	800
3	Profit from 1 st yield	3153000	423000	305500	1985000	1736000	3107000	7408000
4	Expenditures for 1 st yield	850000	130000	110000	150000	220000	230000	1900000
5	Number of persons involved in 1 st yield/ number of days	100	50	50	150	50	50	200
6	Productivity of 1 person per day in AMD	23030	5860	3910	12233	30320	57540	27540

The productivity of this sector is the value created by 1 person within a certain time-frame.

Cabbage production

The cabbage growing in the community of Verin Getashen was initiated in the last **20** years. It is not widespread in the community. On the whole cabbage is cultivated on **10** ha of land. Productivity is relatively low. It is **12233 AMD** per person, which is conceded to productivity in potato, beech, flax and garlic cultivation sectors.

Average yield for **1** ha is **39.7** ton, when the average yield for **1** hectare in Aragatsotn marz is **51.54** tons.

Garlic production

The cultivation of garlic has spread in the community in recent years. It is obvious that the production of garlic is not competitive in the country. Unlike cabbage, where the labour productivity is also low (value created by **1** person); garlic provides a relatively high efficiency. **1** person creates a daily value of **27570 AMD**, which is in **4510 AMD** higher than the value of potato production in the field.

It is more effective than potato, but the risk level is high. There are possible price fluctuations at the market, and rather high cost, which is obtained in Verin Getashen, price fluctuations will lead to damage. For comparison it should be noted that from **1** ha in Gegharkunik marz it is produced **9,28** t garlic, while in Ararat marz the number is **21.89** t .

Potato production

Cultivation of potato in the community of Verin Getashen is a focus direction of the economy. In **2011**, **300** ha of land were used for potato production. Potato cultivation is competitive in the country. Though its crop capacity yields to that of Ararat marz, the average crop capacity of **1** ha is **30.38** ton, which is higher by **4** ton than the average in the country. The average daily value per a person is **23030** drams.

Below are presented the strengths and weaknesses of the sector.

Table 4. Strengths and weaknesses of grain and potato production in Verin Getashen.

Strengths	Weaknesses
The possibility of irrigation in time	Lands are wet and in the case of abundant rains the yield is deteriorated.
For many years potato cultivation has led to the accumulation of positive experience in this area.	The price is dictated by large farms in the market and the small ones are losers.
	Suppliers offer seeds at very high prices, and other sources are out of reach.
	The choice of chemicals is small and in most cases it is of poor quality.
	Compared with the leading communities, a virgin soil unit provides almost 30% lesser yield and with 20% high cost.
	Homogenous fertilization
	The threat of hail, rain waterlogging (overwetting)

Wheat and barley production

Cultivation of wheat and barley is one of the traditional branches of farming in the community, which is competitive in the country. The average yield for 1 ha of winter wheat is **2.82** tons in Verin Getashen, which is in **700** kg higher than the average index of the country.

Despite the competitiveness, productivity is low, resulting in low profitability of this sector. Due to low profitability of wheat and barley, virgin regions are gradually decreased. For the last **20** years, wheat and barley virgin soil is reduced by **70%**.

Low profitability is due to the following factors:

Inaccessibility of high quality seed adapted to local conditions.

Spring wheat doesn't have time to ripen, because of which winter wheat is mainly used in the community. As a result, costs related to tilling are twice increased, as well as the risk of frost-bitten and hail is increased.

Extreme physical frazzle of used agricultural machinery

Wheat harvest is reaped by combiners of **1970-80s**, which is growing at twice the cost of diesel fuel. Harvest loss is **30** to **35%**.

Within the next year, it is not possible seeding of barley at the farmlands, where wheat was seeded and vice versa, because no harvested parts begin to grow next year and crop becomes the gross yield of wheat and barley.

Below is analyzed productivity of the Russian NIVA of 1984s and new Chinese mini-combine designed for grain harvest.

Index	Used (NIVA of 1980s)	New (Chinese mini-combainer)
Fuel consumption	30l	8l
Accumulator	2m ²	3m ²
Seasonal power	1000t	1500-1700t
Yield loss	30-35%	3-5%
Seasonal repair expenses	500 000AMD	50 000AMD
Total rate of productivity		2.1



The use of new combiner will increase productivity of wheat and barley to **2.1** times.

Beech and flax production

These two crops have been handled in the region before the Soviet Union and had high productivity level.

In the recent years, individuals of the community started to handle the crops and as a result the harvest has exceeded all the possible expectations.

The average yield (of both beech and flax) received from a ha land is twice more than the average country index; the profitability is higher as well. The average daily productivity per a man for both beech and flax production is respectively **30320** and **57540 AMD**.

Green peas and berries production

Despite the fact that in agriculture the largest part of productivity and crop capacity are provided by these two areas, there is no experience of growing these crops in the community. As for green peas the average received yield from one ha is three times higher than the average country index and as for berries (strawberry, blueberry, raspberry) crop capacity is twice higher. The accessibility of appropriate agricultural machinery and accurate consultation skills would make the production of these crops one of the most profitable and competitive directions of the community.

Recommendations for agricultural field



Meat, milk production and Bee-farming

Large corneous breeding, sheep breeding and pig breeding have traditionally been developed in the community of Verin Getashen .

Since the period of the Soviet Union the community has been considered as the best milk cattle production farm.

Stimulating conditions for the development of cattle breeding are community's pastures (**6355 ha**), grass fields (**2194 ha**), traditional experience and growing meat price.

The village has **2370** head of cattle, including **1260** head of dairy cows, **550** head of fattened beef cattle, **12** head of horses as well as **3** head of donkeys.

The village has **450** head of sheep, **200** head of lambs, **130** head of pigs and **420** pieces of bee-families.



Below are strengths and weaknesses of the field.

Table 5. Strengths and weaknesses of meat and milk production in Verin Getashen.

<i>Strengths</i>	<i>Weaknesses</i>
The existence of a great purchasing demand.	Veterinary and artificial insemination practice is weak.
As for invaders the danger is not threatened.	Population growth is slow; the involvement of additional financial resources is not available.
The community has meat purveyor.	The absence of slaughter-houses.
Unlike neighboring communities, the amount of pasture forage/grass is higher and much cheaper here.	The substitutes are imported cheap meat types, which occupy most of the market.
The existing barns are in good condition.	The materials for treatment exist however are inefficient.
Pastures are irrigated.	Lack of sub food products.
A great number of pastures.	Veterinary services are not qualified.
A large number of meadows.	Poor quality equipment for grass gathering.
	Lack of milk reception services/places.
	Lack of succulent forage.
	Lack or reprocessing enterprises.
	Lack of making localized pasture.
	Lack of using faraway pastures.

Below is the work productivity calculation of Verin Getashen in milk and meat production, pig breeding, sheep breeding and apiculture sectors.

Table 6 Productivity calculation of meat, dairy and apiculture sectors in Verin Getashen

1	Name	Pig	Cow	Fattened calves	Sheep	Bee
2	Optimal economy	30 two months pigs	10 cows	20 calves	200 sheep	30 beehive
3	Received result in units	40 kg. meat from each 6 month pig	2 000 l. of milk 1 calf	200 kg meat in two years	1 lamb 2,5 kg. of wool	15 kg honey
4	Result	1200 kg. meat	20 000 l. of milk 10 calves	4000 kg. meat	200 lamb 500 kg of wool	450 kg honey
5	Wholesale price per unit	3000 AMD for one kg. of pork	150 AMD for 1 l. milk 70 000 AMD for a calf	2200 AMD for one kg of meat	one lamb for 40000 AMD 1 kg wool for 800 AMD	3000 AMD
6	Received income ('4'x'5')	3 600 000	3750	8800000	8400000	1350000 AMD
7	Required material costs	1250 000	1 860 000	1370000	2620000	270000 AMD
8	Required man/days number	100	100	250	200	60
9	Daily productivity per a man in AMD` (('6':-'7')'8')	23500	18 900	29720	28900	18 000

² The number of intensive working days was taken into consideration while making the productivity calculation.

² The economy is optimal if the amount of animals meets or exceeds the amount of stated numbers.

Sheep breeding and calf breeding are more laborious; where the average daily output created by a person is respectively, **28900** and **29720** drams.

Although the number of intensive working days is the same for both pig-farming and cow-farming, that is **100** days, however in pig breeding the average daily output per worker is **4600 AMD** higher than the average daily output per worker in milk production.

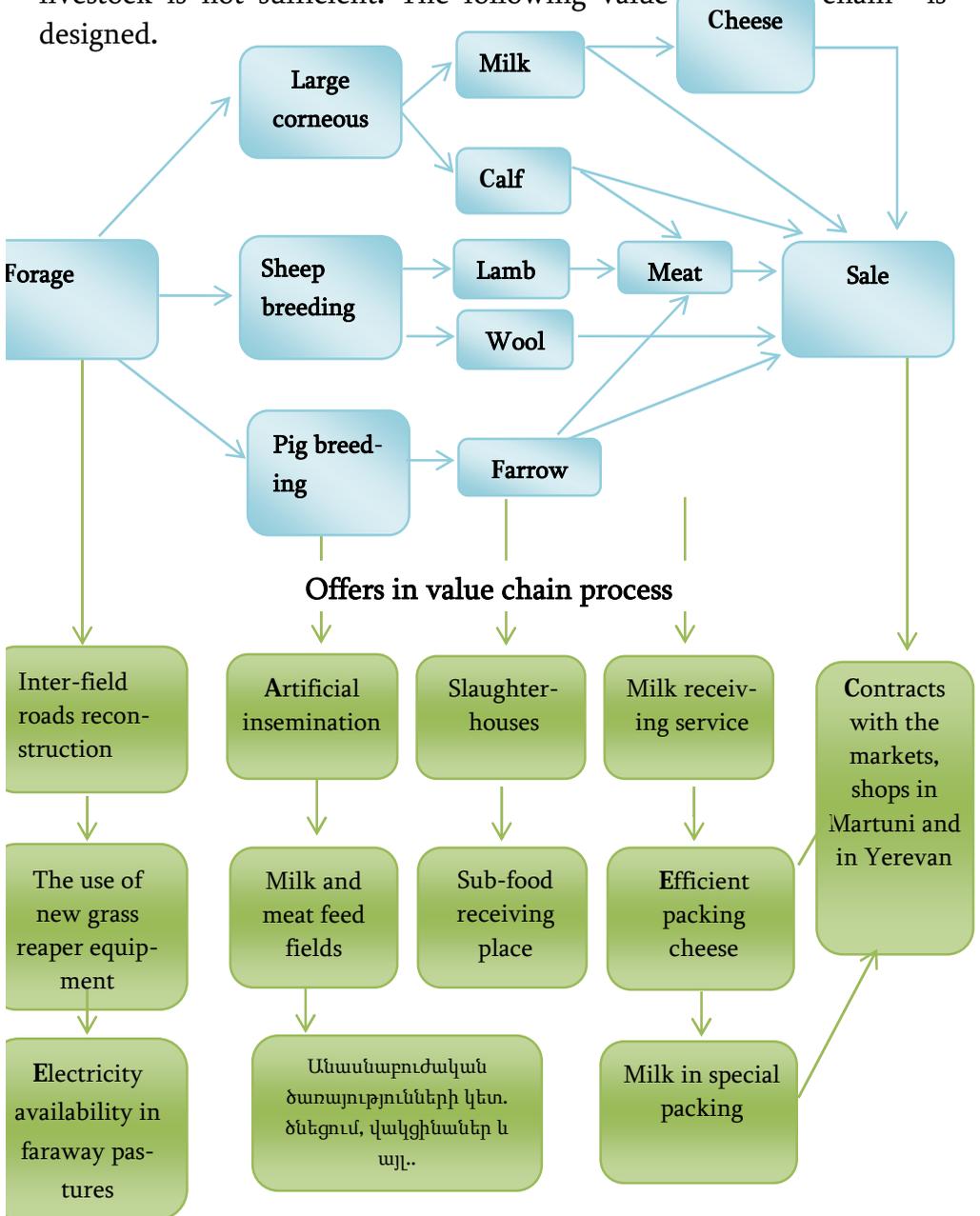
The change of dairy cows' species can double the milk within three years, which in its turn will double the average daily value of a person making it more than **30000 AMD**.

The smallest average daily value per a person is in apiculture, where the human-intensive work days are the fewest.



The value chain of livestock industry

For the creation of greater value only meat and milk production in livestock is not sufficient. The following value chain is designed.



One of the preconditions for the branch development is the renovation of the road leading to pastures.

For the renovation of the road (25 km) **1000000 AMD** is needed annually. Presently, it takes **6** hours for a truck which means that a truck can transfer the load only once a day using **20-25%** of sods. As a result of improvement:

- ⇒ a trunk will transfer the load three times daily,
- ⇒ a trunk will be damaged less and repair costs will be reduced at least two times
- ⇒ meadow areas will be increased in **2-3** times, local revenues will be raised in direct proportion, which will make possible the improvement of the roads next year.

due to the increase in meadow area new equipment/machinery would be possible to buy, the productivity of which is higher than the existing ones in **1.3** times and at the same time it saves fuel and repair costs.

Electricity availability in hilly places will contribute to the increase in the number of people going to faraway pastures. The people, especially the youth, do not imagine their day without television, news; therefore, they cannot deprive themselves from the routine and go to the pasture lands. At the same time the absence of electricity negatively effects on the filtering of milk, use of milk's automatic equipment, lighting as well as on other household problems.

Small business in Verin Getashen

There are 3 grocery and 1 economic stores in the community, a computer club and services, a pharmacy, one construction company and 6 construction groups, turner, private taxis and cargo carriers and individuals engaged in a clothing trade.

Small business has been left out from the main branches of community economy since people have been traditionally engaged in agriculture and do not have entrepreneurial skills. The youth chooses the option of out-of-country work.



Offers for active/working businesses

- ⇒ The use of parcels at stores.
- ⇒ The stores' prices are in line with the stores' prices in Martuni.
- ⇒ Improving the quality of customer service.
- ⇒ Exclusion for selling overdue and old food.
- ⇒ Sale of fuel with modern equipment.

Offers for new business ideas

- ⇒ **B**uilding materials store
- ⇒ **F**arm shop
- ⇒ **C**anteen (for construction groups.)
- ⇒ **C**eremonies hall
- ⇒ **H**airdresser's saloons
- ⇒ **S**ewing/needlework service
- ⇒ **S**hoe repair service
- ⇒ **C**ar service, laundry facility, and vulcanize
- ⇒ **F**arming equipment service facility with modern machines
- ⇒ **P**astries manufacturing
- ⇒ **S**mall greenhouses - vegetables, fruits

Dental clinic

Partner organizations

German International Cooperation Company (GIZ)

German Company for International Cooperation (**Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**) supports the people and society of developing and transitional countries as well as those having achieved industrial growth, to create their own future and improve life conditions.

Germany is the second largest donor country in Armenia after the United States in the field of policy development. **GMHE** programs include a wide range of projects from legal reforms and rural development projects to the environmental, energy, education, private and financial sectors, as well as health development and poverty reduction.

Local economic development is the key direction, in the scope of which many important tools have been built-up and localized, which are successfully used in communities.

Local economic development toolkit - **PACA** is one of such instruments, which is widely used in various private and public sectors.

Gegharkunik Chamber of Commerce

Gegharkunik Chamber of Commerce and Industry (**GCCI**) is among the leading Armenian organizations dealing with local economic development projects. By creating and localizing toolkits for local economy development it fosters to the development of the community as well as to the establishment and empowerment of business community. The basic services of the Chamber are the development of strategic plans for community, implementing assistance, business and strategic planning, business consultation and human rights protection. Since **2009** **GCCI** is a member of local economic development consortium collectively with Near East Foundation, “Hayastan” All Armenian Fund, Business Pareto Consulting Company and GIZ.

“Small and Medium Entrepreneurship Development National Center of Armenia” Fund (SME DNC of Armenia)

SME DNC of Armenia was established by the Government of the RA in **2002**. The supreme management body of the SME DNC of Armenian is the board of trustees headed by the Minister of Economy. SME DNC of Armenia carries out its activities through well developed regional network of branch offices and representations.

