



giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



SAMTSKHE-JAVAKHETI REGIONAL DEVELOPMENT STRATEGY

2014-2021



**SAMTSKHE-JAVAKHETI
REGIONAL
DEVELOPMENT
STRATEGY
2014-2021**

TBILISI 2013

CONTENTS

I. OVERVIEW	5
II. SOCIAL DEVELOPMENT OF THE REGION	6
EMPLOYMENT AND SOCIAL CONDITION	6
HEALTHCARE	7
EDUCATION	8
III. ECONOMIC DEVELOPMENT OF THE REGION	9
NATURAL RESOURCES	9
ECONOMY (EXCEPT FOR AGRICULTURE)	10
AGRICULTURE	12
IV. INFRASTRUCTURE	15
V. ENVIRONMENTAL PROTECTION	17
VI. FACTOR ANALYSIS OF THE REGION (SWOT)	19
VII. REGIONAL DEVELOPMENT STRATEGY: VISION, TASKS AND ANTICIPATED RESULTS	23
VISION FOR THE REGION'S DEVELOPMENT BY 2021	23
TARGETS, TASKS AND ANTICIPATED RESULTS	23





I. OVERVIEW

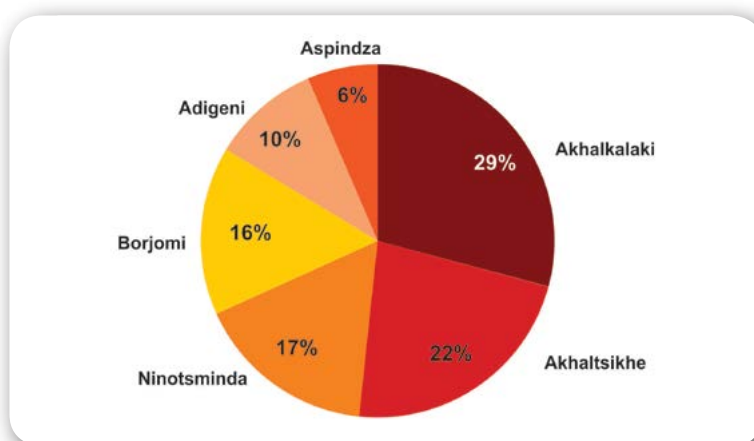
Samtskhe-Javakheti is a region in the South-East of Georgia. It includes three historical provinces – Samtskhe, Javakheti and Tori. The region borders with Adjara, Guria, Imereti, Shida Kartli, Kvemo Kartli, Armenia and Turkey. Its area is 6,421 m². Population density is 32 people per 1 m². There are six self-governing districts in the region – Akhaltsikhe, Adigeni, Aspindza, Borjomi, Ninotsminda and Akhalkalaki municipalities. The region's centre is the city of Akhaltsikhe, which is the seat of the Governor's administration. The region comprises 353 settlements including five towns: Akhalkalaki, Akhaltsikhe, Borjomi, Vale, Ninotsminda; and seven townlets: Bakuriani, Bakurianis Andeziti, Tsagveri, Akhdaba, Adigeni, Abastumani, Aspindza; and 254 villages.

The region has a favorable geopolitical location. It is bordered by Turkey and Armenia which creates promising conditions for trade, economic and cultural relationships with these neighboring countries.

The Baku-Tbilisi-Ceyhan oil pipeline, the Trans-Caspian Gas Pipeline, and the Marabda-Akhalkalaki-Karsi railway pass through the region.

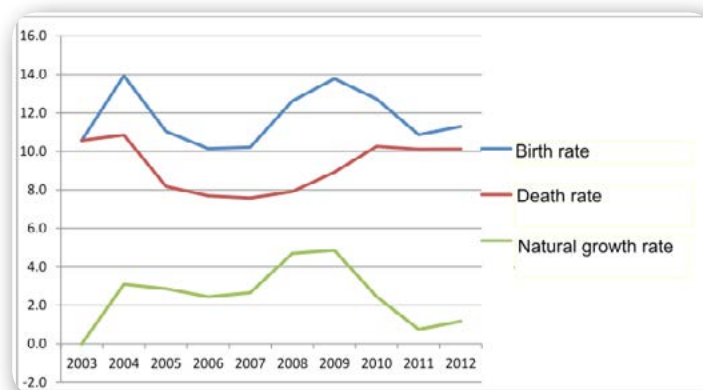
As of January 2013, the population of Samtskhe-Javakheti totaled 213.5 thousand¹, which is a little less than 5% of Georgian population. The last decade has demonstrated a growth trend. 31% of the region's population (66.5 thousand people) lives in cities, and 69% (147 thousand people) – in the villages. Among the municipalities, the most residents are registered in the Akhalkalaki (65 thousand) and Akhaltsikhe (48.4 thousand) municipalities.

Total Value Added for Samtskhe-Javakheti by Sectors (2011)



Samtskhe-Javakheti, together with Kvemo Kartli, Shida Kartli, Adjara and Tbilisi, is among the regions with a positive rate of natural increase.

The rates of birth, death and natural increase for 2003-2012



Source: GeoStat

The region also has a mechanical growth of population. According to the GeoStat, the positive net rate of migration to the region in 2012 totaled 250 people.

1 Hereinafter, the data of National Statistics Office of Georgia (GeoStat), unless indicated otherwise





II. SOCIAL DEVELOPMENT OF THE REGION

1. EMPLOYMENT AND SOCIAL CONDITION

In 2012, the rate of unemployment in Samtskhe-Javakheti, together with Guria and Mtskheta-Mtianeti, stands at 7.5%, which is much lower than the country's rate (15%). The reason is that a large number of the region's population is employed in agriculture. However, the workforce in the region already employed or seeking work in any sector of economy, often need professional development.

The average annual number of temporary workers in the region in 2012 was 9750, most of them hired in construction, processing industry, trade and repair of car and various household appliances.

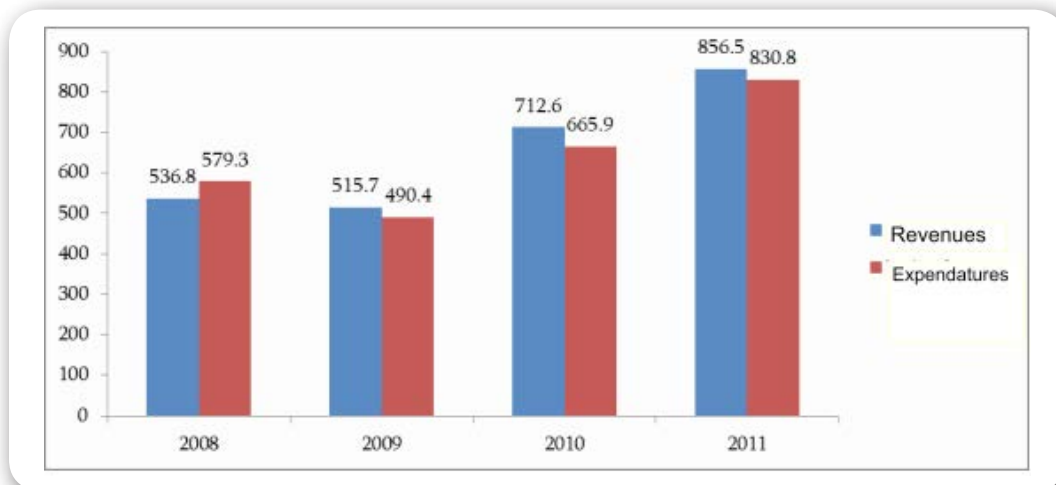
SOCIAL CONDITION

In 2011, the annual monthly income of households in the region was GEL 857, which is GEL 320 up from 2008², making this region a leader in Georgia. However, Samtkhe-Javakheti has one of the lowest shares (13%) of income from hired work.

The income from selling homegrown agricultural products in the region is 22% and is relatively high as compared to the rest of the regions. The largest source of income is remittances and pensions.

The total expenses of the region's population grow steadily and in 2011 it reached GEL 36.7 mln, which GEL 11 mln up from 2008³. Average monthly income of families grow as well, totaling GEL 830,8 in 2001, which is GEL 251,5 up from 2008. Most expense in the family budget are for food products, constituting 26,1% of the total monthly expenses. The average monthly expenses for families in Samtskhe-Javakheti are higher than in other regions of Georgia.

Average monthly income and expenses of households in the region (GEL)



Source: GeoStat

Currently there are 2448 internally displaced people in the region. Their absolute majority is in the Borjomi municipality. No report describing their social, economic and other problems or assessing their needs is available at the moment.

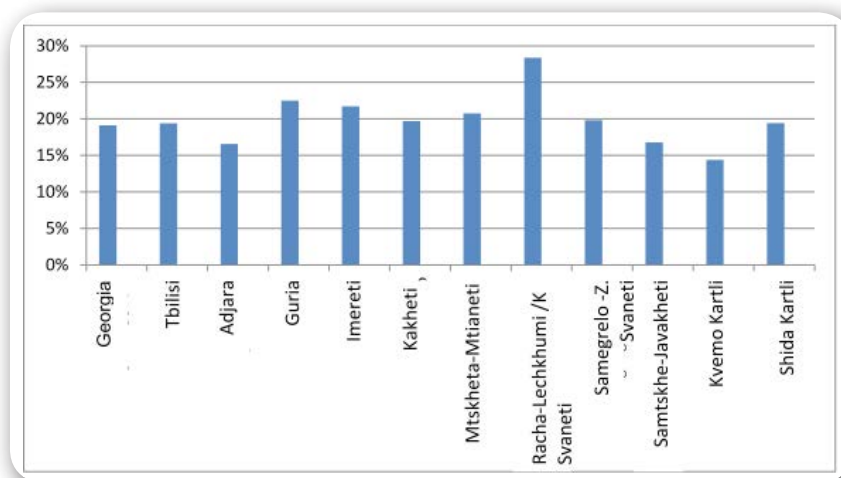
In 2012, 35.8 people received pension and social aid package. This number makes 17% of the region's population and is not a high compared to the rest of Georgia.

2 GeoStat
3 GeoStat; 2013





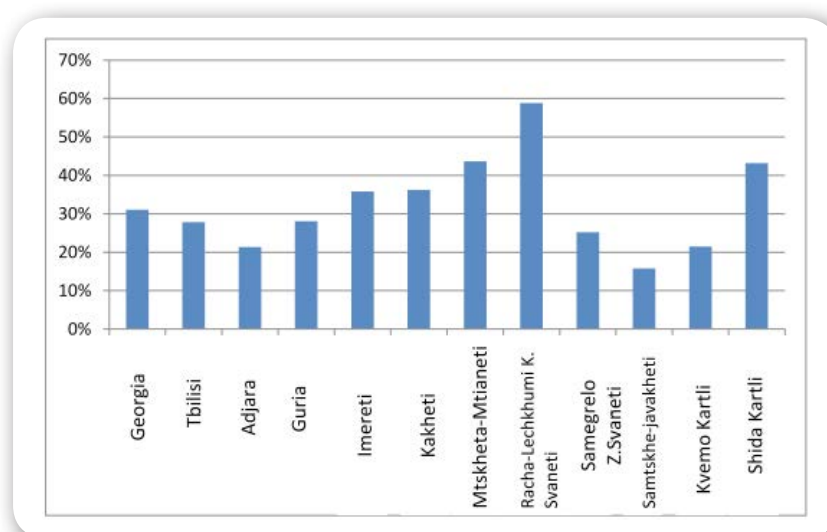
Share of pension and social aid package recipients in the total population of Georgia by regions, 2012



Source: GeoStat

In 2012, subsistence allowance was received by 3.8 thousand families, which is 15% of those registered in the database. This parameter is the lowest in Georgia.

The share of subsistence allowance recipient families in the total number of families registered in the database, for 2011



Source: GeoStat

In addition to the state programs, Samtskhe-Javakheti municipalities carry out various programs aimed at one-time assistance to the population below the poverty line, co-financing medical operations, reliefs for refugees and the people with disabilities, free dinner expenses, assistance to homeless children and other expenses stipulated under social or healthcare programs of the municipalities. The healthcare and social insurance programs designed by the municipalities' budgets are mostly homogeneous and do not differ from one another significantly.

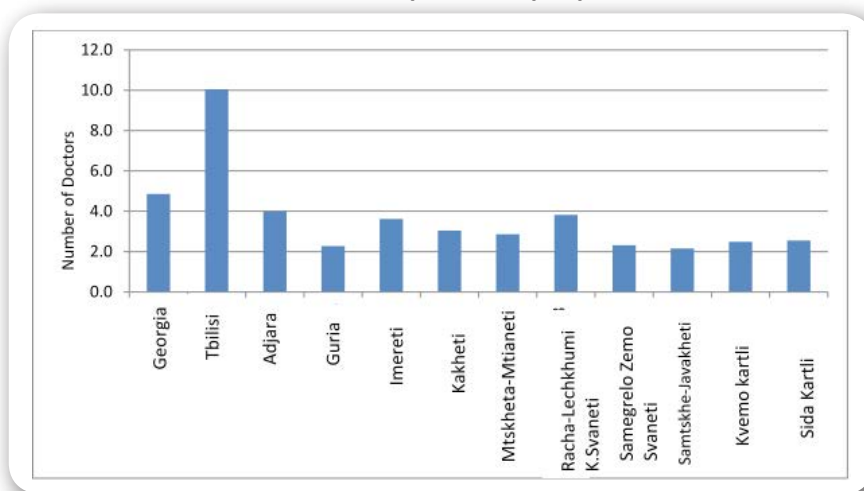
2. HEALTHCARE

Even though the region is rehabilitating medical establishments and equipping hospitals with modern equipment, it is still behind the medical establishments of Tbilisi and a few other regions. Therefore patients often have to go to Tbilisi hospitals and clinics to get professional medical research, diagnostics and treatment, causing them additional expenses.

The region has 2.1 doctors per 1,000 people, which is a low figure compared to the other regions of Georgia. The lack of up-to-date medical equipment and limited opportunities for the medical personnel to improve their skills negatively affect the quality of health services that the region's population receives.



Number of doctors per 1,000 people in 2012



Source: GeoStat

It is obvious from the analysis of the number of doctors by specialization that the medical practitioners are few in the region, especially the surgeons, resulting in the need for urgent transportation of emergency patients to Tbilisi.

As a result of the reforms and restructuring in the healthcare sector in recent years, the state-owned medical establishments have been merged and become larger, or handed over to private ownership. Currently there are 6 hospitals (1 hospital in each municipality) in the region and one specialized in-patient facility in Abastumani.

The number of hospital beds in the region per 100,000 people is 223,4, which is 26% behind the overall figure of Georgia.

All the state-run programs are duly carried out in Samtskhe-Javakheti. The priorities are, and most funds are directed at, emergency medical aid, tuberculosis management, urgent health-care for the population, and village doctor's service.

Within the framework of the medical insurance program launched in the country for the population below the poverty line, over 17,700 people (6261 families) were ensured by September 2012 in Samtskhe-Javakheti, and more than 5,916 teachers had the special teachers' insurance. The government-funded insurance program mainly finances urgent surgical operations, planned operations, cancer treatment, medical-preventive examination and check-ups and other healthcare services. On 1 September, 2012, the government additionally ensured 35,000 pensioners (age) and people with severe disabilities, as well as up to 17,000 children (up to 6 years of age) and students.

3. EDUCATION

There are all types of educational institutions operating in the region, including 205 general education schools (2 of which are private schools), 34 nursery schools, 4 vocational schools and one institution of higher education – Non-commercial Legal Entity **Akhaltikhis Sastsavlo Universiteti** (Akhaltikhe Learning University). The University was authorized and received program accreditation in 2012.

In the last decade, 15 new schools were built and 18 schools were fully rebuilt. The new and restored schools are equipped with new school items. 60 acting schools in the region were partly restored. The remaining schools need repairs. In 2012, new schools were built in Adigeni (3), Akhalkalaki (5) and Akhaltikhe (1) municipalities. 89 schools were fully or partially rehabilitated.

In the last few years, there has been a decline in the number of pupils as a result of various social and economic factors and internal/external migration.

Not all schools in the region have an own school. According to the recent reform, the government was supposed to transport children from villages to the schools but this service has been abandoned and the children in these villages have only limited access to education.

17 public schools in Samtskhe-Javakheti are involved in the inclusive teaching program, which is a good parameter compared to other regions. All of these schools are in Adigeni and Akhaltikhe municipalities. All the newly built school buildings are more or less adapted to inclusive teaching. The new schools have



wheelchair ramps, giving access to pupils with disabilities. Almost all the schools in the region participate in contests and olympiads held nation- or region-wide.

One of the major indicators of the quality of teaching in the region is the percentage of the applicants for United National exams who pass the exam successfully and get enrolled in the universities. In 2012, 1819 pupils finished the 12-year schools, 1127 of them registered for United National Exams and 616 of them got enrolled, which is 55% of the registered pupils. This parameter is lower than in other regions. Some pupils leave for neighboring countries to receive higher education.

There are 34 nursery schools in the regions, mostly in urban areas. There are virtually no kindergartens in villages. Most of the nursery schools in the towns are in extremely poor conditions because they are financed from the local municipal budget, and the budget cannot afford the repair and maintenance of the nursery school buildings.

To facilitate pre-school education in the region, it is important to provide better access to nursery schools, improve material and technical facilities and infrastructure of nursery schools, and hone teachers' knowledge and skills, and further improve the learning process.

There are four faculties in the University: (education, humanitarian and social sciences faculty, business administration faculty, engineering, agricultural and natural sciences faculty, and faculty of law), with 1360 students and 130 teachers, 10 of whom are professors, 42 are associate professors and 4 – assistant professors. Neither the University's nor the vocational schools' curriculums meet the demands of the labor market.

III. ECONOMIC DEVELOPMENT OF THE REGION

1. NATURAL RESOURCES

The region is famous for its healing and recreation zones. Its climate provides an important potential for renewable alternative energy resources in the region.

The region has a rather high solar radiation. So it is possible to use the Sun's energy potential based on relevant technical and economic estimates. Besides, the yearly data of the direction, speed and duration of the winds common in the region, allow for the possibility of using the wind resources for energy production purposes. Currently the works are underway to prove the feasibility of building wind power plants here.

The region is rich in mineral resources, mostly: mineral, thermal and salt-free water, finishing materials, calc-tuff, basalt, diatomaceous earth, pearlite, clay, sand and gravel, scoria, charcoal, gold and andesite. Currently, there are 136 licenses issued for mining and extraction of natural resources. The existing stocks of resources have an important economic potential.



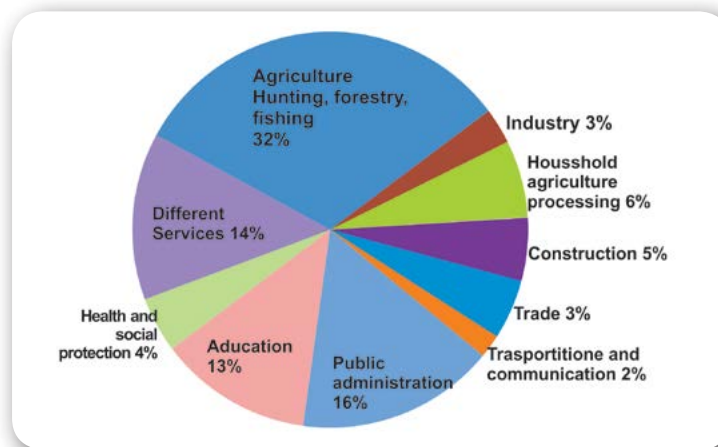


The Samtskhe-Javakheti region abounds in water resources – rivers and lakes. Compared to other regions of Georgia, less thermal waters are found here. The water resources are used for drinking (8%), hydro energy (80%) and industrial, irrigation purposes and for fish ponds.

Samtskhe Javakheti is rich in natural forests. Almost all the forests in this region have a significant role of regulating the climate, protecting the soil, regulating water flow, which is why the region is so wealthy in mineral waters and resort areas. There are 17 species of plants protected by the Red Book and 85 healing plants in the region. It should be noted that forest inventory has not been held in Samtskhe-Javakheti for the last 10-15 years, which means that the official information about the condition and qualitative/quantitative parameters of the forests does not reflect the reality.

2. ECONOMY (EXCEPT FOR AGRICULTURE)

According to the National Statistics Office of Georgia, the **total value added** of the region in 2008-2011 had a positive trend (with the exception of 2009). In 2011, the region's total value added was GEL 665 mln, with agriculture accounting for 32% (GEL 213.7 mln). According to the preliminary information, the growth of total value added in 2012 was 0.7% compared to the previous year. In 2011, the turnover of the enterprises in the region, by economic activities, totaled GEL 367.2 mln, which was 30% up from the previous year.



Attraction of investments and development of SMEs in the region is one of the most important factors for its economic development. In 2011, investments of more than GEL 495 mln were made into the region; including over GEL 397 mln of private investments. In recent years, large foreign investments went to processing industry and energy.

The challenges in this area must be addressed with a number of responsive measures, including raising awareness of stakeholders about the investment potential of the region and development of support services for investment activities in the region. Among these priorities are advising services to those interested in the development of SMEs, and building cooperation between public and private sectors with a special focus on improvement of business infrastructure in the region.

Limited access to the service of financial institutions, low level of business education, poor skills of the labor force, inefficient marketing strategies, as well as outdated technologies and little opportunities for entrepreneurship is having a negative impact on the business development in the region, affecting the employment rate.

Industry

Considering the mineral and other natural resources available in the region, industry in Samtskhe-Javakheti could be developed in the following main directions: mining, mineral waters, and manufacturing of furniture and wood items. With relatively cheap labor force, low-priced electricity and the region's strategic location, it is possible to develop agricultural processing industry here. Naturally, professional development of human resources and use the potential existing in the processing industry are absolutely necessary.





Tourism

In the last 5 years, the number of hotels and other lodging facilities in the region has grown by 40%, and the number of visitors to the region has also increased (approximately 40-45%). Currently there are 138 hotels registered in the region, of which 78 are guesthouses. In 2010 the total turnover of the hotels in the region was GEL 7.3 mln. Foreign tourists arrive mostly from Armenia, Russia, Germany, Israel and the USA. In 2011 Samtskhe-Javakheti was visited by 278500 tourists, 84150 of which were foreigners.

Cultural, recreational and adventure tourism is being developed in the region. Samtskhe-Javakheti is rich in historical and cultural monuments, notably Vardzia Cave Monastery, Tmogvi, Khertvisi, Rabati castles, Zarzma and Sapari Monasteries; there are also a few popular resort zones, among them Borjomi-Kharagauli National Park and the Javakheti Protected Areas. However, further development of tourism requires hotels of high standards and additional construction of small hotels. It is also necessary to offer visitors a modern package of tourism services and improve the level of service, open high quality catering facilities, use the tourism potential of the region's lakes, full exploitation of the eco-tourism opportunities – National Park of Borjomi-Kharagauli and Javakheti Protected Areas, develop new travel guide books and raise public awareness about the advantages of developing tourism.

Energy

Samtskhe-Javakheti has a big potential of becoming a large producer of electricity and a transit node in the region of South Caucasus. Attraction of investments for efficient use of energy resources is one of the most important opportunities of the development of the region and the country in general. Neighboring Turkey, whose demand on electricity is growing rapidly, is one of the most attractive markets for Georgia. Construction of Akhaltsikhe 500/400/200 kWh substation and high voltage transmission lines has just been complete within the frameworks of the Black Sea Transmission Network BSTN project. As a result of this project, Georgia will be the first country in the Caucasus to have the high voltage direct current (HVDC) system, transforming 500 kilowatt alternating current will be transformed into 400 kilowatt high voltage direct current and supplied to Turkey. The substation makes it possible for the country's electricity system to operate in parallel to neighboring countries' electricity systems. Once the transmission line on the Turkish territory is built, it will be possible for Georgia to export own electricity and re-export electricity generated in other neighboring countries to Turkey and via Turkey to East and Central European countries.

Currently the region generates over 115000 MW per hour electricity which is only 1.13% of the country's energy generation. However, after 5 new hydro power stations are built in the coming years, electricity generation is estimated to grow eightfold. Besides, the Ministry of Energy has identified potential locations for building 6 additional hydro power plants. Certainly, to implement these projects, it is necessary to attract investors.





Hydro Power Plants Ongoing Construction Projects in Samtskhe-Javakheti⁴

HPP name	Capacity (MW)	Generation Per Year (kWh)	Estimated investment (mln USD)
Paravani	78	425	125
Arakali	11	63	21.521
Abuli	20	129	39.130
Akhalkalaki	15	85	29.347
Mtkvari	48	253	80

Use of alternative sources of renewable energy and implementation of energy efficient technologies are also among the priorities of the region's energy sector.

Since 2006 British Petroleum's Baku-Tbilisi-Ceyhan oil pipeline, the South Caucasus Pipeline have been passing through the region.

Currently, oil and gas extraction works are underway in Samtskhe-Javakheti but the stocks haven't been discovered yet. Strait Oil and Gas Ltd. has the distribution agreement with the Ministry of Energy of Georgia on discovery and further extraction of oil and gas.

The region also has coal reserves in Vale-Akhaltshikhe basin. The coal-field started operation in 1931 and extracted approximately 150 thousand tons of charcoal annually for thermal power plants in the East part of Georgia. Vale Akhaltshikhe coal-field contains the resources of 71.3 million tons but it is currently abandoned.

CROSS-BORDER COOPERATION

The region's location facilitates development of cross-border cooperation. Currently, there are mostly trade relationships. From the viewpoint of cross-border cooperation, it is necessary to deepen collaboration with neighbors in various sectors of tourism and economy.

The present juridical and institutional structure of regional government and self-government does not fully allow for cross-border cooperation on the level of public services. That is why, the reforms for decentralization that the Ministry of Regional Development and Infrastructure is planning, are very important.

3. AGRICULTURE

Samtskhe-Javakheti is a strictly agrarian region where the share of agriculture in total value added is largest (32%). Most of the human resources are employed in agriculture. The share of agriculture in the region's total value added in 2006-2011 was approximately 33%, higher than the same figure in other industries of the region and other regions of Georgia.

The region's agriculture is made up of family farms and commercial farms. Over 90% of production is accounted for by family farms. 73% of family farms produce agricultural products for own use, and for the remaining 27%, agriculture is a source of income.

The level of commercialization of agriculture in the Samtskhe-Javakheti region is higher than that of the whole country.

More than half of agricultural land is pasture. Second largest type of agricultural land is arable land. The remaining area consists of mowing lands, uncultivated land and perennial plants.

Despite the fact that the average parameters of the region's productivity both in plant growing and cattle breeding, are higher than those of the country, only third of the existing potential is being used. Agriculture has an extensive nature and local products cannot compete with the imported products.

PLANT GROWING

⁴ The Ministry of Energy and Natural Resources. <http://menr.gov.ge> and Caucasus energy and infrastructure. "Mtkvari HPP Project Presentation" p. 5.09.07.2012 http://cei.ge/data/file_db/Presentation/Mtkvari%20HPP%20Project%20Presentation%20March%202012_DVUZXF_SP.pdf





The plant growing in the region mainly consists of potato, cereals and vegetable growing. One of the weaknesses of the region is short vegetation period. According to the study of rural infrastructure, early frost is far more usual in the region than in the rest of the country.

In the Samtskhe-Javakheti region, the area of annual crops reduced in 2000-2001. The reduction slowed down to half, and even lower, rate, both in the region and in the whole country.

It is worth to note that a significant share of **potato** production is concentrated in Samtskhe-Javakheti, where 52% of the country's potato plantations are located (2011). The yield in the region exceeds the country's average by 22%.

Potato Growing and Yield⁵

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Plantation area, thousand ha												
Georgia	37.3	37.4	37.9	37.6	38.4	40.4	23.5	21.5	24	18	21.2	20.3
Samtskhe-Javakheti	9.8	11.5	11.6	12.7	13.2	15.4	8.4	8.3	10.1	7.7	10.2	10.6
Region's share	26%	31%	31%	34%	34%	38%	36%	39%	42%	43%	48%	52%
Yield, ton/ha												
Georgia	8.9	11.6	11.4	11.7	11.3	10.9	7.4	10.8	8	11.5	11.1	13.6
Samtskhe-Javakheti	8.8	15.3	15.3	16.3	12.9	12.9	6.7	13.2	10.6	17.7	12.6	16
Comparison	99%	132%	134%	139%	114%	118%	91%	122%	133%	154%	114%	118%

Source: GeoStat

In 2001 the vegetable yield in the region was 32% more than the country's average. Almost all the families in the region have their own vegetable garden primarily for own use. Only small part of vegetable is taken to the market for sale. Vegetables are grown for commercial purposes by farmers who own lands of up to 1 ha.

Cereals – the region's contribution to production of barley is significant – constituting on average 35% of planted area and 42% of production. The average yield in the region is 18% higher than the country's average. Both the plated area of cereals and the size of yield have a decreasing tendency.

Production of annual crops is declining due to reduction in the planted area and the yield. Production of perennial plants, unlike annual plants is characterized with less volatility and less noticeable decline.

5 Source: GeoStat





CATTLE BREEDING

The region accounts for approximately 9-14% of the country's cattle breeding and 10% of beekeeping.

Number of Cattle

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Livestock (thousand)												
Georgia	1,177	1,180	1,216	1,243	1,178	1,191	1,080	1,049	1,046	1,015	1,049	1,088
Samtskhe-Javakheti	99	100	101	106	94	93	121	102	89	103	111	136
Region's share	8%	8%	8%	9%	8%	8%	11%	10%	8%	10%	11%	12%
Sheep (thousand)												
Georgia	547	568	611	629	689	720	697	711	690	602	597	577
Samtskhe-Javakheti	115	87	94	97	89	88	90	73	62	87	75	72
Region's share	21%	15%	15%	15%	13%	12%	13%	10%	9%	15%	13%	13%
Bee families (thousand hives)												
Georgia	98	105	118	133	152	150	146	184	207	257	312	328
Samtskhe-Javakheti	11	13	14	16	17	16	17	17	13	18	22	26
Region's share	11%	12%	12%	12%	11%	11%	11%	9%	6%	7%	7%	8%

Source: GeoStat

Growth in number of livestock is observed in Ninotsminda, Akhaltsikhe and Adigeni, especially in Ninotsminda municipality. The number of sheep and goats was less volatile in Adigeni, Aspindza and Akhaltsikhe municipalities, and more volatile in the rest of municipalities. The Akhaltsikhe municipality has a much bigger number of pigs than other municipalities, their number doubling in 2010. Poultry and bee keeping is mostly concentrated in Akhalkalaki.

The Samtskhe-Javakheti region has a significant share in livestock production, accounting for 8-17% of the country's total. The average yield of milk in the region exceeds the country's average by approximately 15%.

Local farmers have little information or knowledge of different livestock breeds. The most predominant breeds are the Mengrelian and the so-called local breeds. Artificial insemination is not widely used and controlled. It causes degeneration of breeds and has a negative impact on livestock productivity, health, resistance and growth and development. The fodder used in winter is mostly hay, silo is not used and combined fodder is used rarely, which results in low productivity and weight loss of livestock.

Deterioration of pastures is a serious problem in the region. The pastures are for common use, suffering from various problems. Their productivity has decreased significantly. A simple system of rotation grazing could reduce soil erosion by maximum 15% in the first year and additional 5% annually for five more years, and volume of fodder could rise by more than 20% that would lessen the impact of overgrazing.

Veterinary service is poorly developed in the region. Vets are absent in many communities and farmers often have to address to municipal centers or neighboring communities. In summer, fatal diseases such as "Turkish" and anthrax are common. Part of the Samtskhe-Javakheti area is a summer pasture and cattle often migrate here from plains. The paths for seasonal movement of cattle and summer camps are not in appropriate condition, creating even bigger threat of spreading diseases. Municipal centers do not have modern laboratories to identify the animal diseases in a timely manner.

FISH FARMING

Fish farming and the area of artificial ponds and reservoirs are on the rise. Salmon is bred in special artificial ponds, while chub, common whitefish (lavaret) and other species – in natural water reservoirs. Trout is mostly farmed in small family farms. Each family has 5-8 specially arranged concrete ponds, and annual production is about 2-5 tons. Some trout farms in the region are also specializing in breeding young fish (fry). The biggest challenges for development of fish breeding are: bad condition of access roads, outdated





practice of fish growing and breeding, inappropriate equipment, lack of special vehicles and inefficient processing capacity.

MECHANIZATION

Despite the fact that the region’s average parameters are higher than those of the whole country when it comes to agricultural production and availability of agricultural services, this segment still needs significant support for further development. Region is suffering from lack of tractors and combines, and other agricultural machinery. The mechanization service centers are in mutual ownership of farmers’ cooperatives. Such center serves both member and nonmember farmers. About 33% of the region’s villages are unable to use the agricultural mechanization service. Access to mechanization is affected by two main factors: remote location from the villages and high price of service (the mechanization works are rather expensive in the region). Another big problem is poor experience and expertise of mechanizers.

Availability of Agricultural Mechanization

	No need/never heard	Can't use	Uses
Georgia	24%	26%	51%
Samtskhe-Javakheti	14%	19%	67%

Source: Overview of Rural Infrastructure, 2011

High quality **seed** is primarily imported from the European countries. In recent years, Ukrainian, Armenian and Turkish seeds were also imported but their quality is relatively low.

Nearly all municipal centers have stores with a large assortment of **plant protection products** of both high and relatively low quality. Pesticides are used basically for potato growing. Most popular fertilizers are organic fertilizers and ammonium nitrate. Complex fertilizers are not used which upsets plant nutrition, worsens product quality and accumulates nitrates in crops.

Warehouse facilities are not adequately developed in the region. Deserted buildings and old cooling facilities have been converted to warehouses. They are mostly used by large potato farmers. Small and medium sized farms tend to keep the yield at home. The existing facilities need to be equipped so that they are turned into cooling facilities so that yield is safely stored for a longer period.

One of the factors impeding agricultural development of the region is a poor condition of the irrigation system. It now supplies water to around 15% of arable land which significantly hampers agricultural development and is a big challenge for the local population because its majority is employed in agriculture. In 2001, droughts hit about 42% of the region’s rural areas.

Trade infrastructure is more developed and used by farmers than the warehouse infrastructure. The local farms make most use of agricultural retail and **wholesale markets** of meat and milk. Still, many farmers cannot afford service of the trade infrastructure.

IV. INFRASTRUCTURE

Infrastructure in the region has significantly improved in the past 5-6 years. Some of the funds allocated for infrastructure development are used for rehabilitation of road network, fresh water and irrigation systems, bridges, sewerage, schools and pre-school establishments, squares and gardens, and setting up outdoor lighting. Since 2013, new infrastructure projects have been launched to restore streets in cities and roads in villages, as well as water supply and sewerage systems.

The length of motorways in the region is 1340 km. Of this, 195 km of international highways are used for transit, connecting the country with Armenia and Turkey. The length of the roads for internal (national) transportation is 270 km, and the length of the roads for local transportations is 945 km. The highway network used for international transportation is paved with asphalt concrete surface. Only 77,8% of the roads of national importance has asphalt surface, the remaining is covered with gravel.





Within the framework of Millennium Challenge program, 245 km of roads, bridges and roadside facilities were rehabilitated in Samtskhe-Javakheti. As a result of improved road infrastructure, there are better conditions for development of trade, tourism and other business sectors. There have been other projects for road infrastructure improvement in the region (Akhaltsikhe-Vardzia, Tetrtskharo-Akhalkalaki, Bakuriani-Akhalkalaki roads have been repaired).

Khashuri-Akhaltsikhe-Vale branch (length 60km) of Georgian railway runs across Samtskhe-Javakheti and is used for shipping cargo and transporting passengers. Marabda-Akhaltsikhe branch of the railway is currently being repaired (178 km).

The Baku-Tbilisi-Kars Railway project was launched in 2007 under the international treaty signed by Georgia, Azerbaijan and Turkey. Its purpose was to rebuild and repair the Marabda-Akhaltsikhe railway in the Georgian territory and build a new railway from Akhalkalaki to the Turkish border.

The total length of the gas distribution network in Samtskhe-Javakheti is 373 km. Even though important gasification works are already started in the region, some families do not have gas delivered to their homes. That is why majority of the population (75,4%) uses liquid gas for household purposes. According to the 2011 data, utility companies supplied gas to only 16,2% of households.

The irrigation system in the region supplies water to around 15% of arable land, which significantly hampers agricultural development and is a big challenge for the local population because its majority is employed in agriculture.

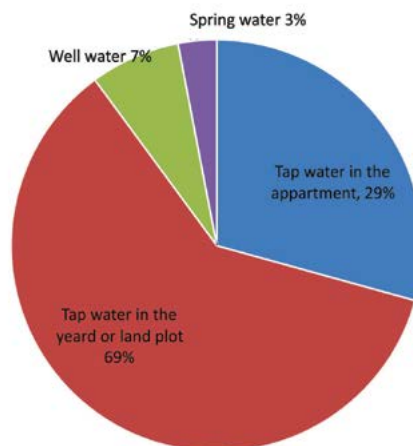
To improve communication infrastructure in the region, it is necessary to build the electricity supply system, increase access to internet and set up outdoor lighting network.

Fresh Water Supply System Condition in Samtskhe-Javakheti

Municipality	Total length (km)	Damaged part (%)
Akhaltsikhe	80	90%
Aspindza	17	20%
Adigeni	17	70%
Borjomi	56	15%
Akhalkalaki	55	90%
Ninotsminda	55	40%

Source: Samtskhe-Javakheti Water Supply & Sewerage Company, 2012

Most of the population has access to fresh water. Municipality centers and some rural areas are supplied with fresh water via the central water distribution system. Some villagers get water from the running water taps in the village districts. A rather significant portion of water is lost because of the poor condition of water distribution system. The volume of used water is reported only in some part of the region’s territory. It should be noted that approximately 70-80% of the fresh water system in the region is damaged and needs repair.



Source: Georgia urbanization report, World Bank, 2012





The sewerage system is only in the centers of municipalities. Majority of rural areas are left without sewerage system. Samtskhe-Javakheti region does not have the facilities for cleaning sewage water, causing contamination of surface waters (rivers) in the region. What is more, forests and lakes are also polluted with diffuse waters.

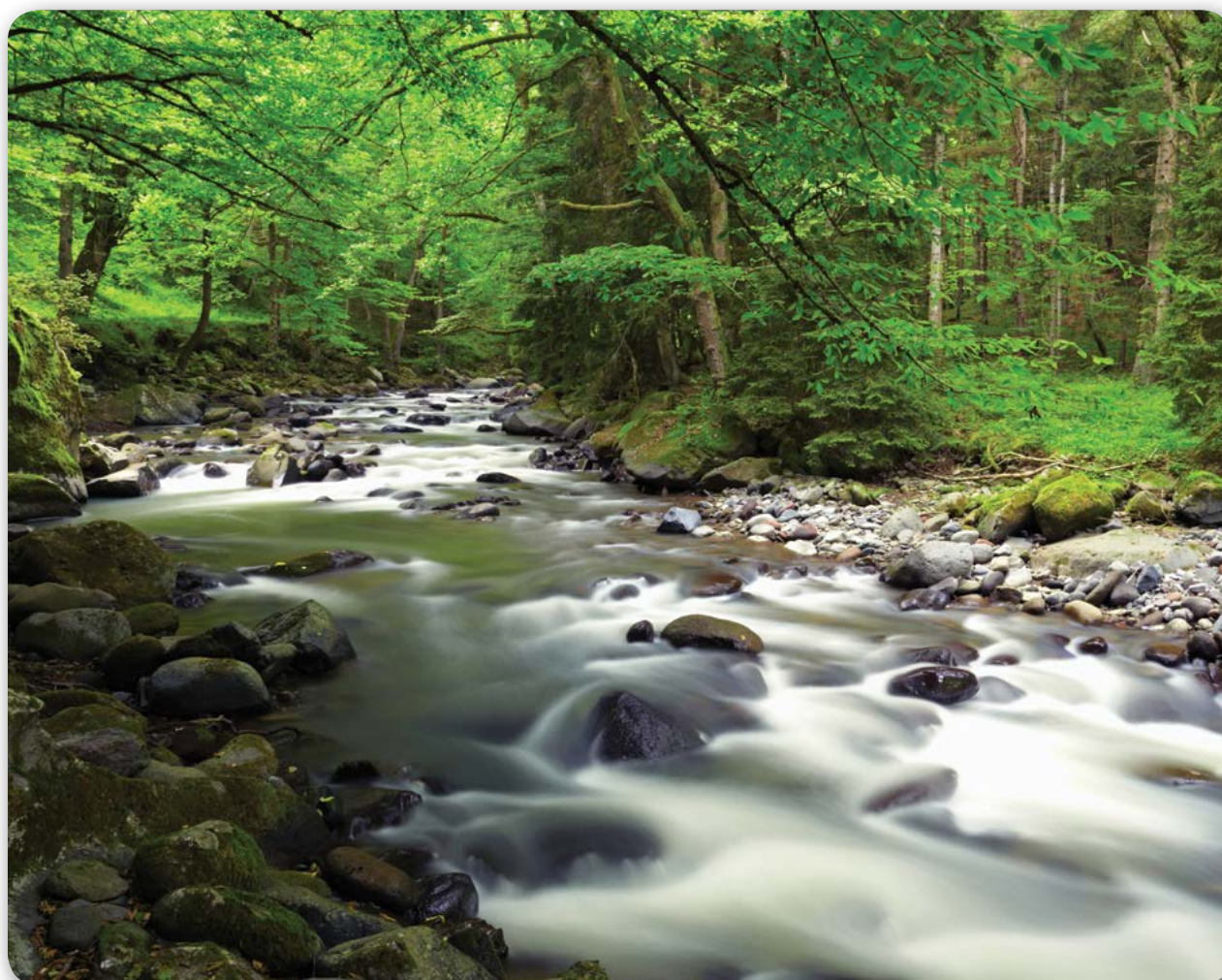
Underground water quality is not monitored. As for surface water resources, the river Mtkvari and its branches are included in the hydro-meteorological monitoring network and the water quality is more or less controlled.

Waste management is one of the main environmental problems in Samtskhe-Javakheti. None of the five official landfill sites has environmental permit. Household waste is collected regularly in municipal centers and towns (Bakuriani and Abastumani) by utility services. In the villages no such services are available and people throw wastes sporadically in the neighboring areas, creating uncontrolled small dumping sites.

Waste is not arranged-separated in the region. Nor is there any practice of composting organic waste. To solve the problems related to waste disposal and environmental pollution, it is planned to build new sanitary landfill sites in Ninotsminda and Borjomi municipalities; but in the rest of the municipalities sustainable waste management is still a big challenge, standing in the way of the region's development.

V. ENVIRONMENTAL PROTECTION

Compared to other regions of the country, Samtskhe-Javakheti has only a few operative plants and emission of hazardous materials to the **atmosphere** is relatively low. The region's share in the country's emissions has increased and reached 0.27% in 2012, while in 2011 it was only 0.17%. Diffuse waters, transport vehicles and standing waters are main source of air pollution in the region. In Abastumani, there is a crossborder emissions monitoring station (EMEP) where air quality is continuously monitored. Samtskhe-Javakheti is not included in the hydro-meteorological monitoring network and air quality is not monitored.





The overall condition of forests is alarming. All easily accessible groves are degraded and sparse. The cut and idly lying wood adds to the problem by posing the threat of spreading diseases and pests. Unchecked cutting, unregulated use of pastures, forest fires and diseases have had significant negative impact on the forest ecosystem. The most dangerous pest in Samtskhe-Javakheti is considered to be engraver beetle.

The region's population is highly dependent on the forest and actively uses wood. Because alternative fuel is expensive, people use firewood. One of the reasons of forest degradation and future risk factors are natural and anthropogenic forest fires and intensive spread of parasite pests.

The Borjomi-Kharagauli National Park, the first park in the Caucasus meeting international standards, is located in Samtskhe-Javakheti. With its area, it is one of the largest protected territories, and is a member of the European wilderness protection organization- PAN parks, which is a guarantee of best protection and sustainable tourism. The Borjomi-Kharagauli National Park has rare, endemic species, some of them included in Georgia's Red Book. The fauna of the national park is diverse too. Most of the mammals that inhabit the park, are included in the Red Book of Georgia.

The Javakheti Protected Areas, with the total area of 16209,42 ha, was established in 2011. Javakheti ecosystem is recognized as one of the most important for migrating birds, most of which are on the IUCN Red List of threatened species. The Javakheti Protected Areas has a good potential for developing ecotourism (bird watching). The region is a natural habitat for birds and it is possible to watch rare species during mass migration.

Natural Disasters

The Samtskhe-Javakheti region differs from other regions of Georgia with its peculiar geologic structure and natural environment. Landslides, mudflows, erosion, avalanches, floods and rock-falls are common. The whole region is in the 8-9 magnitude seismic risk zone. Region's all river banks are periodically eroded, activating landslides.

In the Akhaltsike municipality, severe and extremely severe droughts from one to three months have become more frequent, affecting the rural areas and accelerating soil degradation process. Strong hails have also been observed in the region in recent years.

To protect the local population from possible threat during development and reactivation of geological processes it is important to take preventive, rehabilitation and adaptation measures in the vulnerable areas of the region. In the region's territory where the risk of dangerous geological processes and the damage ratio is high, it is advisable to displace rural population as preventive measure. It is necessary to develop a contingency plan and preventive steps for the region.





VI. FACTOR ANALYSIS OF THE REGION (SWOT)

REGION	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Favorable geographic location • Abundance of natural resources • Construction of a railway connecting with Turkey • Crossborder trade with neighboring countries • Recreation and health resorts • Presence of all levels of educational institutions • Natural conditions and practices of agricultural production 	<ul style="list-style-type: none"> • Poor condition of infrastructure (gasification, water supply system, solid waste management, sewerage), outdated irrigation system • Use of out-of-date production technologies • Extensive agriculture • Lack of skilled workers • Low access to financial resources
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Development of production based on natural resources • Development of intensive agriculture • Development of various types of tourism • Development and use of alternative energy sources • Building closer crossborder economic relations • Turning into a large electricity producer/transit node 	<ul style="list-style-type: none"> • Natural disasters • Financial and economic crisis

SOCIAL DEVELOPMENT

HEALTHCARE	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Recognition by the central and regional government of healthcare and social insurance as priorities of the state social policy • Moving the healthcare sector to insurance service • Supporting the people below the poverty line and issuing insurance policies to them • Uniform state medical insurance • Step-by-step development of the healthcare infrastructure • Growth of private investments in the healthcare sector • Low rate of hospital mortality • Completed projects in general education and ongoing projects in infrastructure rehabilitation and improvement • Well implemented inclusive teaching 	<ul style="list-style-type: none"> • Low quality of medical service • Lack of up-to-date technical equipment in medical and preventive treatment institutions • Poor management of medical establishments and poorly qualified personnel • Low access to medical service and medicines for vulnerable social groups • Inadequate public awareness about social and medical services
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Training and professional development of medical personnel • Increased access to information about medical service and social insurance • Development of preventive healthcare • Creation of a strong municipal hospital in the region's center to provide complex medical treatment to patients • Tailoring of the educational system with the labor market requirements • Providing opportunities for improvement of teachers' skills and raising quality of teaching. 	<ul style="list-style-type: none"> • Lack of controls over the activities healthcare facilities • Epidemics • Lack of government funds





EDUCATION	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Presence of all levels of educational institutions in the region • Free-of-charge preschool education • Inclusive teaching 	<ul style="list-style-type: none"> • Depreciated buildings and school items • Few certified teachers • Failure of educational programs to fully meet the labor market demand • Relatively low level of general education, few certified teachers, limited opportunities for teachers to grow professionally, no moderns equipment in schools, low access to higher education for ethnical minorities because of not knowing the official language • Limited funds of the municipalities for maintaining kindergartens • Unorganized transportation for schoolchildren, limiting their access to education due to logistics problems and improper optimization processes in schools, inadequate integration of ethnical minorities into the education system
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Renovation of school and preschool buildings • Adapting higher education and vocational education institutions to the labor market demands • Improving teachers' professional skills 	<ul style="list-style-type: none"> • Lack of resources for free-of-charge and good quality preschool education

ECONOMY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Favorable geographic location • Natural and energy resources available in the region • International regional projects and renewed communication infrastructure • Natural conditions and traditional practices of agricultural production 	<ul style="list-style-type: none"> • Low awareness of the region's investment potential • Few initiatives in the sector and little experience of working with investors • Lack of qualified workforce • Insufficient extraction of natural resources • Limited access to export markets • Limited access to the services of financial institutions • Low level of business development • Outdated technologies
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Professional development of human resources and skills improvement • Development of natural resources extraction and mining • Use of crossborder cooperation perspectives to implement interregional/international projects • Deepening cooperation between private and public sectors to identify and implement the projects that benefit both sectors • Use of renewable and environmentally friendly energy resources 	<ul style="list-style-type: none"> • Economic and financial crises • Political instability





TOURISM	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Growing number of tourists in the region • Significant number of hotels and guesthouses • Tourism infrastructure rehabilitation projects • Skiing infrastructure in Bakuriani • Borjomi-Kharagauli National Park and its tourist routes. • Abundance of historical and cultural monuments • Diverse landscape, flora and fauna • Traditional craft and folk art 	<ul style="list-style-type: none"> • Few high standard hotels • Outdated tourism infrastructure • Poor quality of tourist services • Few tourist agencies operating in the region • Poor condition of internal roads and access routes to historic monuments • Lack of entertainment facilities • Lack of high quality eating places and outlets trading in souvenirs/handmade crafts • Absence of any strategy for exploiting the tourist potential of the region
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Building high standard hotels and additional small hotels • Offering newly organized tour packages to clients • Supporting improvement of tourist services • Opening high quality eating places and other tourist facilities • Exploiting the tourist potential of the region's lakes (fishing, boating) • Raising tourism awareness of the region and promotion through appropriate marketing campaigns • Offering extreme tourism services in the Trialeti gorge • Exploiting the ecotourism opportunities in the region • Developing joint crossborder and interregional (with Adjara) tourist routes 	<ul style="list-style-type: none"> • Pollution of tourist zones and decline in tourism potential because of a lack of any waste management system • Reduction in the forest resources and environmental degradation • Political instability and decline in the number of foreign tourists in the country





AGRICULTURE	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Favorable climate and rich soil • Availability of arable land • Favorable conditions for development of animal farming • Recognition of agriculture as a priority by the government 	<ul style="list-style-type: none"> • Low productivity of agricultural plants and low cattle productivity • Low level of cooperation between farmers • Lack of cooling facilities/warehouses for storing agricultural products and absence of processing plants • Absence of various financial instruments/products • Few advisory /consulting centers and ineffective service • Outdated agricultural technologies and very little mechanization • Poor condition of the irrigation infrastructure • Lack of seeds and saplings production • Absence of a market for the products manufactured in the region, low competitiveness of the products • Little use of modern technologies in production • Short vegetation period
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Use of unused/rested lands in agriculture • Improvement of the irrigation system • Renovation of aricultural equipment • Development of advisory/consulting centers • Cooperation between the government and financial institutions to improve the farmers' access to a range of financial products • Development and support cattle breeding and seeds/saplings production • Development of veterinary, plant protection and food products safety Government services 	<ul style="list-style-type: none"> • Drought, hail and other natural phenomena • Unchecked spread of diseases and epidemics





VII. REGIONAL DEVELOPMENT STRATEGY: VISION, TASKS AND ANTICIPATED RESULTS

1. VISION FOR THE REGION'S DEVELOPMENT BY 2021

The region of Samtskhe-Javakheti will become economically one of the fastest growing regions in the country with efficient and sustainable use of present natural resources that includes fossil and renewable energy resources.

Regionally introduced information management system about local business potentials, development possibilities for human resources and improved infrastructure will make the region more attractive to both local and international investors. Small and medium-sized entrepreneurship will be developed in the region under assistance provided by the relevant extension services and cross-border trade.

The agriculture will be the leading field in the region's economy. Innovations introduced in agricultural production, as well as mechanisms of farmers' cooperation and consolidation, storing and cooling facilities will assist production and the sales of produce both inside and outside the country. The processing facilities of the agricultural production will bring some additional incentives to further develop the fields of plant growing and cattle breeding in the region.

Tourism will become one of the major fields of the region's economy. Tourists service facilities and information centers recruited with personnel with relevant qualifications in a field of regional tourism will provide high quality services to foreign tourists visiting the region. Recreational zones of the region will attract foreign and local tourists for leisure and treatment.

Integrated system of waste management and well-functioning infrastructure of water supply and sewerage systems will ensure a safe environment for local population and visitors as well as prevent pollution of the environment.

Frequency of natural disasters, risk of economic losses and presumptive damages inflicted on humans' health and ecosystem will be decreased. Ecological conditions of the region's recreational zones and forests will be improved.

2. TARGETS, TASKS AND ANTICIPATED RESULTS

ECONOMY

Strategic Target 1 – More efforts to attract investments in the local economy

Strategic Task 1.1 – Enhancement of stakeholders' awareness of the region's investment potential

Result 1.1: The database of the region's investment potential is developed and is accessible

Explanation. The region has a huge development potential for new successful business initiatives. Therefore, there is the need for developing new investment projects, creating and updating a proper database in order to provide interested investors with accurate and timely information about investment projects and current potential available in the region.

Result 1.2: Investor service system is available now which will provide accurate information and data to all individuals interested to invest in the region's economy

Explanation. In parallel to elaborating on investment projects and collecting/distributing information about investment potential however, the most important is that all physical and legal entities who are interested to invest in the region should receive maximum informative and administrative support for planning and developing their investment activities in good time and as effectively as possible. Creation of the regional center for investor services under support of the National Investment Agency of Georgia, will be a successful solution to the current challenge whereas the center could as well, be incorporated in the regional administrative structure.





Strategic Target 2 – Promoting development of entrepreneurship in the region through efficient services supporting small and medium-sized enterprises

Task 2.1 – Providing efficient services to support small and medium-sized enterprises operating in the region.

Result 2.1.a: *Business development centers will provide consulting services to small and medium-sized business entities operating in the region.*

Explanation. Small and medium-sized business entities operating in the region often lack sufficient human and financial resources necessary to handle operations effectively that determines a major slowdown in business activities and their development. It is highly desirable to establish special centers to work closely with local businesses and provide advisory services. The consultations provided can be on different issues such as tax and finances, supporting start-ups, elaborating business plans, acting as a mediator with credit institutions, conducting market research, etc.

Result 2.1.b: *Special public-private sector partnership system is established that is aimed at improving business infrastructure in the region*

Explanation. Partnership between local government and private sector is one of the ways for developing new businesses in the region. As a result of improved regional communication infrastructure and implemented public-private joint rehabilitation projects, many local residents may find it possible to start thinking about the business start-ups (in a field of tourism as an example). Hence, the public-private partnership must remain consistent to be engaged into a constant communication with local entrepreneurs for identifying and developing new business possibilities and ideas.

Strategic Target 3 - Supporting development of entrepreneurship in the region

Strategic task 3.1 – To provide support in use of current processing industry potential and professional training of human resources available in the region

Result 3.1.a: *Professional training centers in the region ensure training of the local labor in different priority fields*

Explanation. Availability of qualified labor force is one of the important factors for developing local production. Therefore, to identify which industrial vocations are on demand, a special research must be conducted. The research results should be taken into consideration before setting the new vocational schools in motion or tailoring existing educational programs to identified gaps in qualifications of human resources. This is the direction where the most active partnership is required between several institutions and agencies: Ministry of Education and Science of Georgia, Ministry of Economy and Sustainable Development of Georgia, Local Authorities, private sector and educational institutions functioning in the region.

Result 3.1.b: *Business projects are developed and implemented for mobilizing the region's natural resources*

Explanation. In 2014-2021, the local government (self-governing bodies) through close partnership with private sector will regularly develop investment projects as well as attract investments for their implementation in order to fully mobilize the region's potential of industrial development.

Strategic Target 4- Promotion of tourism development in the region

Strategic Task 4.1. – Support of the tourism business in the region

Result 4.1.a: *Tourism business is diversified in the region*

Explanation. Maximum use of the region's touristic potential needs some new business initiatives to be launched as well as development of the existing enterprises. The region's potential to attract more tourists relies on cooperation between the National Tourism Administration, Regional Administration and self-government bodies and private sector. With their joint effort, they could develop new business tourism project initiatives to be implemented by a direct participation of the private sector. Several tourism-related businesses have a good potential for development; such as premium hotels as well as guesthouses to operate in the region as well as some innovative touristic services to offer (such as mountain climbing/hiking), pre-





mium dining facilities to be launched, souvenir shops for handmade items and souvenirs to be opened, the region's lakes as popular touristic destinations (sailing and fishing) to be used, some extreme tour routes and services in Trialeti gorge to be arranged, eco-tourism potential to be used where protected territories of the Javaketi region will be interesting for visitors to observe, balneological (therapeutic bathing and medicinal springs) resorts in Aspindza, Borjomi and Akhaltsikhe to be rehabilitated.

Result 4.1.b: Several exhibitions and festivals are planned to be held in the region annually.

Explanation. To establish a tradition of organizing exhibitions and festivals on an annual basis bears the crucial importance for development of the local tourism potential which periodically would attract visitors to the region. Local municipalities and administration, in cooperation with private sector will elaborate on plans for projecting 3-4 exhibitions and festivals every year. Legal Entity of Public Law (LEPL) National Tourism Administration will ensure such relevant initiatives to be supported and implemented.

Result 4.1.c: Around 10 touristic routes are mapped for eco-tourists in the region

Explanation. New routes are necessary to be mapped and organized with own infrastructure (paths, direction signs and garbage bins to install). Municipalities by consulting with private sector, should map around 10 routes equipped with well-organized infrastructure that will be attractive to eco-tourists.

Strategic task 4.2 – Increase familiarity with the region's tourism potential

Result 4.2.a: 4 Tourism Information Centers will provide information to the tourists visiting the region.

Explanation. Currently only 2 information centers are functioning in the cities of Borjomi and Akhaltsikhe (on the territory of Rabat fortress) and additional 2 centers are still needed to operate in two other municipalities in order to assist visitors by providing qualified information about specifics of the region. It is anticipated that municipalities in cooperation with National Tourism Administration will ensure to open two more centers. It is also possible to establish some additional centers in the recreational zones.

Result 4.2.b: Awareness and advertising campaigns are regularly held both in Georgia and abroad for promoting the region's tourism potential.

Explanation. For promoting the region's touristic potential, it is extremely important to hold relevant advertising and PR campaigns on a regular basis in specially targeted regions and countries. For this purpose, the local government (regional administration and self-governing bodies), private sector and the National Tourism Administration will cooperate on developing several promotional videos to be transmittable to pretargeted countries and regions by means of various electronic and social media. There will be some additional events held either in the county or outside which will help increasing awareness about the region's touristic potential.

Result 4.2.c: Tourists' guidebook is developed and periodically updated

Explanation. It is also important to issue an illustrated and periodically updated tourist guidebook that will include all information and data that might be interesting for the people visiting the region. Local authorities, National Tourism Administration and the private sector should coordinate their efforts and elaborate on this guidebook. Some donor organizations also can take part in this project. The important aspect of this guidebook is that it should not be a one-time effort; it must be constantly updated on a yearly basis adequately depicting new touristic routes and latest developments in the region's infrastructure.

Strategic Task 4.3 – Improvement of the quality of services provided to tourists

Result 4.3.a: It will give some job-training possibilities for those who are employed in the field of tourism and service provision.

Explanation. Development of the regional tourism will need people employed in this field or those who seek employment in tourism industry. The professional training center will be launched in the region to offer special qualification development programs for local population and some others as well from nearby regions.





Result 4.3.b: A satisfaction survey of the visitors is periodically conducted in the region

Explanation. For the tourism industry to develop, it is important to conduct visitors' satisfaction survey periodically (at least once a year) in the region. This will assist the government and local businesses to better plan their tourist services and to adjust their quality to meet the visitors' expectations. Special methodology can be used to complete the visitors' and tourists' satisfactory survey under coordination with the National Tourism Administration and active involvement of the private sector. Some research organizations can undertake the survey on a request of municipalities or/and the National Tourism Administration.

Strategic Target 5- Support in use the region's energy potential

Task 5.1 – To support electricity production in the region

Result 5.1.a: New hydroelectric power stations will be built in 2014-2021 in the region.

Explanation. The Ministry of Energy and Natural Resources of Georgia has developed 6 projects for hydroelectric power production in the region (Chela dam, Muskhi dam, Kvabliani dam, Uraveli dam, Uraveli dam 2, Zarzma 1 dam). The projects need investments to be completed. Their total capacity is 30.71 megawatts. The ministry will actively work with potential investors to complete and finalize those projects.

Strategic target 6- Development of crossborder cooperation in the region

Task 6.1 – Deepening the cooperation with different regions in neighboring countries in the fields of tourism and economic relations as well as in the environmental protection.

Result 6.1.a: Crossborder projects to be implemented in the region

Explanation. Big-scale projects in trade, infrastructure, tourism, agriculture and some other fields can be launched in Armenia and Turkey – the contiguous regions of Samtskhe-Javakheti. Some projects can also be implemented with neighboring countries in environmental protection for better management of shared protected territories and water resources. In this context, construction of Akhalkalaki-Karsi railway route will become a priority as an important international project. For this purpose, the local government on a regional administration and municipality level and under coordination with the central government should actively start cooperating with contiguous regions of different neighboring countries for identifying, elaborating and implementing mutual projects in the nearest future.

AGRICULTURE

Strategic target 7 – Development of agriculture productivity and competitiveness in the region of Samtskhe-Kavakheti

Strategic task 7.1 – To increase productivity in plant growing by the end of 2021

Result 7.1.a: Improved accessibility to seeding and planting materials

Explanation. Productivity increase in plant growing will require a special research to be undertaken to assess the present practices of producing and using the seeding and planting materials in the region as well as farmer's access to the quality products and industrial capacity of those who produce such materials. Hence, the technical and financial support program should be designed and based on this field research and assessment. One of the priorities is a training program to be developed and held for specialists of extension services and the farm service centers which would envisage preparing and delivering guidebooks/instructions to agricultural producers and farmers on how to produce seeding and planting materials. Arrangement of demo plots will also help intensify production of agrarian produce in the region.

Result 7.1.b: Improved accessibility to fertilizers and plant protection means

Explanation. Providing the technical and financial support to the farm service centers as well as holding training programs for their specialists and those of the extension services will help farmers access the better quality fertilizers and plant protection means. It is also very important to regularly monitor selling prices on fertilizers and other inputs, to conduct an analysis on price dynamics and development of information spreading system with coordination and support of the region's extension services.





Result 7.1.c: Improved accessibility to agricultural machinery

Explanation. Improving mechanization services will help increase accessibility to the agricultural machinery which can be possible by supplying the region with more tractors, combines, implements and stone collector machines. It can also be possible, together with specialists of MSCs (machinery service centers) and extension services, to help establish several financial products in different financial institutions in order to assist farmers in getting access to better machinery services in the region. Implementation of the permanent training program for MSC personnel will soon increase efficiency of the mechanization in agriculture production.

Result 7.1.d: Half of the arable land will be irrigated in the region

Explanation. Only 15% of arable land is irrigated in the region which greatly hinders agricultural development and still remains to be the biggest challenge for the locals engaged in farming. Therefore, the current situation would require some specific measures to be taken such as establishing farmers' union (cooperatives) that will enable the local farmers to access some of the agricultural services with their joint effort (exploiting irrigation system together, etc.). It is also advisable to conduct a feasibility study of handing over secondary irrigation scheme to a farmers' union for management that will determine the need for further actions. By cooperating with extension services and farm service centers, it is possible to introduce some modern irrigation schemes that will help demonstrate advantages of such systems.

Result 7.1.e: Increased accessibility to collecting, storing, elevating and processing services

Explanation. Development strategy for the storing and processing enterprises will be based on the assessment of activities and infrastructure of such facilities. Some special training programs will be developed and implemented for the extension specialists on issues of food safety/quality assurance and management of processing enterprises (under the support of the business development center as referred to in 2.1a clause of the present document).

Besides, there will be a system established to regularly undertake monitoring of prices for processing services, analysis on price dynamics and spreading of information. The joint efforts of the financial institutions, extension services, farm service centers, enterprises and farmers' unions to cooperate in development of new financial products will support further development of current enterprises, creation of new ones and introduction of food safety and quality assurance systems.

Result 7.1.f: Land Cadaster Service implements the policy for management of the land resources

Explanation. While developing the policy for land resources, the central government, in order to attain the set objectives, should engage the local self-governing bodies by establishing relevant working groups. It is also advisable to engage extension service and private owners in this process in order to fully protect rights of private owners and support development of the land market in the region.

Result 7.1.g: Increased accessibility to the state plant protection services

Explanation. Increased efficiency of the plant protection measures will require to undertake a research of activities carried out by the relevant State service which would be used as the basis for drafting a development plan, implementing a training program for specialists of the Food National Agency as well as studying a lab capacity of the Plant Protection Service to compile an action plan as a result.

Strategic Target 7.2 – To increase productivity in cattle breeding by the end of 2021

Result 7.2.a: Increased accessibility to breeding services provided in the region

Explanation. It is important to assess the cattle breeding activities in the region and consider the research results when planning the development measures. A research on breeds' improvement and cattle breeding practices held by farmers will help increase efficiency in breeding initiatives. Information bulletins about specifics of different breeds as well as demo cattle farms are planned to be issued, distributed and arranged respectively.

Increased accessibility to the breeding services will include introduction of embryo transfer practices with the help of extension services as well as the facilities for artificial insemination with the support of fi-





financial institutions, producers and the region's extension service by developing relevant financial products.

Result 7.2.b: Increased accessibility to veterinary services

Explanation. First of all, the current veterinary services should undergo evaluation, the result of which must be used for drafting an activity plan for development. In parallel with other important issues, this plan will include some of those that require development such as cattle movement routes, slaughterhouses and crematoriums. It is necessary to support a monitoring and controlling system of animal disease in close cooperation with the private sector as well as creation of a registry for small-scale farmers under the relevant state program in order to vaccinate all cattle the registered small-scale farmers have under their ownership. In cooperation with extension service, a list of diseases should be compiled for including it in the state vaccination program. For improving efficiency of vaccination services, a special training program is required to be designed and held for veterinarians as well as compiling statistical data about disease outbreaks in a close cooperation with the Ministry of Agriculture of Georgia.

Result 7.2.d: Increased accessibility to quality fodder in the region

Explanation. In order to achieve the set result, the current animal feeding practices must be examined and the results of the examination must be used for drafting an activity plan for its development. In a close cooperation with extension service, special guidebooks on animal feeding practices should be prepared and distributed among farmers. The number one issue is to make an inventory of pastures and to assess their current conditions on the basis of which the further actions will be planned for their improvement. It will be significant to consider and generalize recommendations and field researches conducted by other organizations working on the same issues in the region.

Result 7.2.d: Farmer's accessibility to high quality and standardized services provided by slaughterhouses, storing and processing enterprises in the region

Explanation. Current operations and infrastructure of the present processing enterprises should undergo assessment and the assessment results should be used for preparing a development plan for this industry. It is required to let the extension service specialists undergo a special training program on the issues of food safety and quality assurance and to strengthen management capacity in the processing enterprises. Besides, there will be a system established to regularly undertake monitoring of prices for processing services, analysis on price dynamics and spreading of information. The joint efforts of the financial institutions, extension services, farm service centers, enterprises and farmers' unions to cooperate in development of new financial products will support further development of existing enterprises, creation of new ones and introduction of food safety and quality assurance systems.

Strategic target 7.3 Increased productivity of fishing by the end of 2021

Result 7.3.a: Increased accessibility to high quality breeding fry in the region

Explanation. After assessment of the breeding operations, the development program shall be prepared which, on the one hand, will include preparation and distribution of the guidebooks on the breeding practices and on the other, it will envisage arranging demo farms as well as preparing and conducting special training programs for improving producers' skills in fish breeding.

In cooperation with extension service, there will be a system established to regularly undertake monitoring of selling prices on different breeds of fry, conduct analysis on price dynamics and spreading of information; and, with joint efforts of the financial institutions, producers and extension service providers, new financial products will be developed and available on the market. Business Development Center referred to in the Result 2.1.a, should support implementation of such activities.

Result 7.3.b: Improved accessibility to high quality equipment and facilities for fish transportation

Explanation. Under initiative of the financial and technical support to be rendered for the farm service centers, the special program is to be elaborated in cooperation with extension service which will supply farmers with relevant requirement and transportation facilities.





Result 7.3.c: Increased accessibility to services to be provided by cooling/storing facilities and processing enterprises

Explanation. Development plan for the cooling/storing facilities and processing enterprises should be based on the research that will assess the current practices and infrastructure used in processing industry. The mentioned plan will include trainings to be held for the extension specialists on the issues of food safety and quality assurance as well as guidebooks and instructions on the same subject and other permanent training programs to be designed for entrepreneurs' professional development and training courses for enterprise management. It is also a priority to promote both development and creation of existing and new enterprises. Business Development Center referred to in the Result 2.1.a, will provide assistance in defining and implementing permanent professional development training course for entrepreneurs and a training course on the enterprises management.

Result 7.3.d: Increased accessibility to high quality fish feed

Explanation. Financial institutions, extension service, farm service centers, enterprises and farmers' unions altogether will elaborate the development plan and financial products for this industry in order to support upgrading the existing enterprises producing the fish feed and creating new ones as well as help them introduce food safety and quality assurance systems and boost the mutually beneficial cooperation between farmers' unions and enterprises.

Task 7.4. – Support cooperation between farmers

Result 7.4.a: Farmer' group is operating in the region for sales, services and purchases of the production means

Explanation. The most important precondition for establishing and developing farmers' cooperatives is that the farmers themselves should have a good understanding of the concept of such cooperation. For this purpose, the most important action will be to spread educational information about this concept among farmers. Additionally, there will be a program launched to help farmers improve their knowledge and skills as well as increase their accessibility to financial resources. Establishment of a registry for farmers' cooperatives will help a development strategy for farmers' cooperatives to be successfully implemented.

Task 7.5- Development of the market infrastructure

Result 7.5.a: Increased accessibility to the market infrastructure in the region

Explanation. Development plan should be elaborated on the basis of assessment of the present retail and wholesale market activities and infrastructure. The present task would require elaboration of the permanent professional development training programs for entrepreneurs as well as developing guidebooks, instructions and training courses on the issues of food safety and quality assurance systems. Business Development Center referred to in the Result 2.1.a, will provide assistance in implementation of the permanent professional development training program for entrepreneurs.

INFRASTRUCTURE

Strategic target 8 – Improvement of the region's communication infrastructure by building and rehabilitating regional and local roads

Task 8.1- Building and rehabilitating regional and local roads

Result 8.1.a: Majority of regional roads are paved with asphalt/concrete and equipped with relevant water drainage and other protection systems

Explanation. Only 77.8 % of intrastate highways and roads are covered with asphalt-concrete pavement. Other roads are just paved with gravel. Therefore, by the end of 2021, the significant part of such roads should be covered with asphalt-concrete and must be equipped with water drainage and other protection systems. Adjustment of the road infrastructure is crucial for the region's development especially for the fields of economy such as agriculture, tourism and freight transportation.





Result 8.1.b: Rehabilitation of Locally important roads

Explanation. Regionally important roads are 945 kilometers long, and the majority of them are damaged. The old asphalt-concrete cover is destroyed almost everywhere and its graveled part is a poor condition. It is advisable to finalize the rehabilitation of the regionally important roads by the end of 2021 - to be equipped with relevant water drainage systems and other equipment for road infrastructure.

Task 8.2 - Uninterruptible high quality fresh water supply for local population and adjustment of water supply and sewerage network infrastructure with environmental norms and standards.

Result 8.2 High quality fresh water is supplied to households throughout the region

Explanation. Fresh water is supplied to the region's population by means of an approximately 300 kilometer-long pipeline network and water towers, 70-80% of which is damaged. In some settlements, there is no fresh water supply system. Such deficiencies have negative implications on both well-being and health conditions of local population and tourism and business development possibilities. Therefore, in the following 8 years it is planned that the local households will be supplied with fresh water under relevant infrastructure project.

Result 8.2.b : Rehabilitation and construction of water supply and sewerage network infrastructure will be finalized by the end of 2021.

Explanation. The central government is planning to manage the water resources according to the internationally approved and accepted integrated management principles, to gradually regulate water supply and sewerage systems and to build waste water treatment premises. In the municipalities where land is not scarce and there is a self-flowing sewage system, some small-scale relatively less costly technologies, such as lagoons, sand filters with recreational effect and mechanical equipment for cleansing or their combination, can be used.

Improving the water supply and sewerage systems will significantly increase accessibility to the fresh water resources, reduce water losses to the minimum and effectively plan water supply costs.

Result 8.2.c: Construction/rehabilitation of the water treatment facilities is gradually taking place.

Explanation. It is significant to note, that the state environment protection strategy (NEAP -2) includes the water resource management as one of the short-term-objectives to reduce water contamination with non-treated municipal wastewaters. Therefore, it is planned to construct a facility for the biological wastewater treatment in the region for the city of Borjomi and a small resort town of Bakuriani, when one such facility is going to be completed soon in the city of Ninotsminda. In addition, there is a possibility to plan and implement other types of environmental protection projects with active support of donor organizations, such as construction of a closed facility for industrial wastewater treatment in another resort town of Abastumani that is exactly adaptable to soilless and mountainous area.

Task 8.3. – To improve the power supply system in the region

Result 8.3.a: Individual electricity metering is completed in the region

Explanation. The Samtskhe-Javakheti region has 100% electrification, however electricity metering in certain households is still underway. Therefore, the local government, in close cooperation with distribution company, must complete electricity metering by the end of 2021.

Result 8.3.b: Uninterruptable power supply is provided to the region's population

Explanation. The local population is still suffering from periodic interruptions and low voltage of power supply. Therefore, it is necessary to fully modernize the infrastructure (replace/add transformers) to guarantee the proper functioning of the system with no power losses and interruptions.

Task 8.4 – To increase internet accessibility in the region

Result 8.4.a: Full Internet coverage is available in municipality centers and recreational zones in the region





Explanation. At present there are some deficiencies in internet coverage in larger settlements and municipality centers on the region's territory. Increase in accessibility to the internet is crucial for improving the communication, supporting business activities and enhancing awareness of the local population. Therefore, in cooperation with the private sector, uninterrupted internet coverage will be in place by the end of 2021 in almost all the larger settlements, municipality centers and recreational zones throughout the region.

Task 8.5. – Outdoor lighting of the region

Result 8.5.a: All municipality centers and recreational zones will be fully equipped with outdoor lighting systems by the end of 2021

Explanation. Only a few inhabited areas and roads have outdoor lighting installed that has certain negative implications on the safety of the locals and the visitors. Therefore, it is necessary to equip all municipalities and recreational zones with outdoor lighting systems in the following 8 years.

Task 8.6. – To provide the region with a natural gas supply system

Result 8.6.a: Only 60% of the region's households are supplied with natural gas

Explanation. According to the latest data received from utility companies, the natural gas is supplied to only 16.2% of the local households. In the following 8 years, through close cooperation of utility companies and the local government, the majority of local population will be supplied with gas as a result of the programs that are going to be implemented.

Strategic task 9 – Introduction of waste management standards for safety assurance of ecosystem and local population

Task 9.1 – Improvement of waste management system

Result 9.1.a: Households' solid waste management integrated system is introduced in the region

Explanation. It is important for the region to improve the existing waste management system and introduce the integrated management system. The latter will include the introduction of 3R hierarchy⁶ of waste management, reduction of wastes near water sources, and improvement of municipal waste management services on the local level. Special awareness programs are needed to be carried out on a regular basis for the local society and representatives of business sector to be involved in environmental protection measure or just simply change their attitude towards the environment.

Considering the geographic characteristics of Samtskhe-Javakheti region, it is possible to initiate arrangement of one landfill or construction of one waste processing enterprise, as well as stations for waste transportation or/and temporary places for waste disposal in the municipalities with less open areas for waste dumping.

Result 9.1.b.: Waste and pollution prevention in place

Explanation. Introduction of the waste management integrated system will help reduce water contamination by household wastes and most likely, will have a positive impact on possibilities for effective use of the region's recreational and balneological resources. In protected territories, together with infrastructure development, a proper waste management will create more benevolent conditions for those who favor ecotourism.

Result 9.1.c: Waste management strategy and action plan is prepared for the region

Explanation. The regional administration in cooperation with self-governing bodies will elaborate on waste management strategy and action plan in order to bring the regional waste management into full compliance with the State strategy and policy under the international norms and liabilities (NEAP 2, EU-Georgia Associated Agreement, Ratified international conventions on waste management).

6 Reduce, Reuse, Recycle





HEALTHCARE

Target 10: Increased efficiency of healthcare and social insurance services

Task 10.1 – Improvement of healthcare facility infrastructure in the region.

Result 10.1.a: Optimized bed units are available in inpatient care facilities

Explanation. The local government (on a municipality level), in cooperation with the central government of Georgia, should periodically (annually) conduct a research on the existing demand for the state-owned and managed inpatient care facilities and subsequently carry out the optimization process.

Result 10.1.b: Medical/health care facilities are rehabilitated

Explanation. Almost all medical/health care facilities operating in the region need rehabilitation. Their current conditions do not allow thorough medical services. Therefore, health care facilities should undergo full rehabilitation in the following 8 years.

Result 10.1.c: Health care facilities are furnished with modern equipment

Explanation. It is planned to fully furnish healthcare facilities with modern equipment in the following 8 years. At the first stage, the regional administration will undertake a needs research, but after, all medical/health care facilities will be furnished with modern equipment as a result of the close cooperation between the central and regional governments.

Task 10.2 – Improved skills of the medical personnel

Result 10.2.a: Availability of trainings and re-trainings for professional development of the region's medical/health care personnel

Explanation. Less qualified medical personnel is one of the main reasons of the lower than average quality medical services in the region. Therefore, the central, regional and local government bodies should mutually coordinate possibilities for professional development in a form of re-training of local medical personnel. Training center will serve high, medium and low-rank medical staff (873 individuals) in the region.

Task 10.3 – Implementation of social programs to meet the needs of socially vulnerable population

Result 10.3.a: Increased efficiency of the governmental programs

Explanation. All the state programs defined under the relevant Government's resolutions are implemented in the region of Samtskhe-Javakheti. In order to increase accessibility to health care services, municipalities should financially participate in the state programs.

Result 10.3.b: Municipal program aid allocations for socially vulnerable families are increased

Explanation. It's important to note that aid allocations for existing and new programs should be increased which, if implemented successfully, will improve living conditions of the vulnerable population.

Task 10.4 – Increase of public awareness about medical and social insurance services

Result 10.4.a: Regionally-based special information system will increase awareness of the local population about all social and health care programs

Explanation. For assisting the local population to learn more about the state and municipal programs for social and health care, special information system will start functioning in the region in order to provide interested individuals with detailed information about services rendered under each program and eligibility criteria necessary for program participation.





EDUCATION

Strategic Target 11 – Improvement of Education quality and accessibility

Task 11.1 – Infrastructure development for the secondary educational institutions

Result 11.1.a: *Building and premises of the secondary schools will be fully rehabilitated by the end of 2011*

Explanation. There are 206 secondary schools functioning in the region out of which 2 are private. 127 public schools require major renovations. Besides, rehabilitation and renovations projects for the schools in the cities of Akhalkalaki, Borjomi and Aspindza, need prioritization. For this purpose, local municipalities in coordination with the Ministry of Education and Science of Georgia will plan and implement the rehabilitation activities.

Result 11.1.b: *More than 10 pre-school educational institutions will be constructed while existing majority of such institutions will undergo rehabilitation by the end of 2021*

Explanation. There are 34 kindergartens in the region that are mainly functioning in the cities. A majority of the region's kindergartens require major renovation. By the end of 2021, rehabilitation of all kindergarten buildings will be finalized and some new pre-school premises will be constructed.

Result 11.1.c: *New school inventory will be supplied to almost all public schools in the region by the end of 2021.*

Explanation. To receive full secondary education, upgrading of the school inventory is considered to be a major requirement. At this point, school inventory in almost all public schools in the region is outdated; therefore, full upgrade of the majority of schools will take place in the following 8 years.

Task 11.2 – Tailoring professional and higher education to the region's needs

Result 11.2.a: *Colleges and vocational schools offer students accredited BA and/or vocational educational programs that are tailored to local needs and demands*

Explanation. For increasing a number of employed individuals in the region, educational programs on a college or vocational school level should match with demand of the local job market. It is significant to note, that the research that is referred to in Result 3.1.a. should be periodically conducted for analyzing present demand and supply of the local job market. The research data will be used both by local educational institutions and local self-governing bodies for planning different municipal programs and projects.

Natural Resources and environmental protection

Strategic target 12 – Effective use of the region's natural resources

Strategic task 12.1. – Use of alternative energy resources available in the region

Result 12.1.a: *Use of wind energy potential in the region*

Explanation. There are significant alternative energy resources in the Samtskhe-Javakheti region and their effective use will have a positive effect on both living conditions of local population and their income, it might as well, mitigate some negative impacts of climate change by reducing emissions of greenhouse gases. Use of alternative energy potential will significantly reduce usage of timber available in the region by replacing it with other energy carriers. After finalization of ongoing technical-economic justifications for a wind power plant in Paravani ravine, the installation process will begin. The plant will have the capacity of 120 megawatt-annual (MW) and 110 mln kWh output of electricity that will supply approximately 12,000 households.

Result 12.1.b: *Use of solar energy potential in the region*

Explanation. Considering the climate of the region, solar energy resources can be used for small-scale hotels and public places for hot water supply (by installing solar system collectors). Use of solar energy potential and introduction of energy efficient technologies will be supported by the business development agency that was referred to in Result 2.1.a. of the present document.





Result 12.1.c: *Use of biomass energy potential in the region*

Explanation. The region has the high potential for use of biogas due to its well-developed cattle breeding that has been traditional household practice for many years. Biogas equipment will enable farmers to use biogas either for household purposes or in greenhouses. Sub-product of biogas (animal manure without methane) is traditionally used in villages as the highest quality fertilizer. Sharing such experience will help increase living conditions in villages and inhabited areas which would also help mitigate possible negative impacts on the environment. Out of 14 saw-mill residues, it is possible to establish residue-free production as making “pallets” out of industrial waste for heating. It would only require from the central government to give certain incentives for assimilating the energy potential of the biomasses and help achieve certain commercial profitability that, most likely will also be supported by the business development agency that was referred to in Result 2.1.a.of the present document.

Strategic task 12.2. – Ensured safety of the local population, mitigation of all the risks of economic losses and reduction of all possible negative impacts both on humans and the environment

Result 12.2- *Improved air quality monitoring*

Explanation. If feasible, the air quality monitoring station in the city of Akhaltsikhe will be rehabilitated

Result 12.2.b. *Increased awareness of the local population about environmental protection*

Explanation. Although the region has quite significant educational resources, they are not reflected in planning and implementing environmental protection measures in the region. Despite efforts of the non-governmental organizations operating in the region, neither local population nor business sector representatives can realize the harmful impacts that pollution might have on the environment. It is important to educate the local people in environmental issues as well as to increase awareness of the business sector about pollution free environment and support introducing new technologies (waste-free production).

Result 12.2.c: *Safety of the region’s population will be ensured in accordance with an approved action plan of preventive measures against natural disasters-geological processes*

Explanation. Preparation and implementation of a plan on preventive measures against uncontrollable geological forces, inclusion of the region into the network of an early notification system about anticipated natural disasters is the significant precondition for ensuring safety of the region’s population, as well as for reducing any possible risk of economic losses and impacts both on human and the environment. The mentioned system will also help implement both objectives and liabilities set under the state strategy on environment protection and international agreements.

Result 12.2.d: *Regional municipalities will be elaborating on localization and liquidation plans for emergency situations*

Explanation. For the safety of the region’s population, each municipality should elaborate on localization-liquidation plan to be used in emergency situations that will enable the self-governing agencies to effectively control the situation under imminent threat and act against uncontrollable forces in order to protect humans and ecosystem as well as prevent any presumptive losses to the economy if possible. It is also important, under cooperation and communication/consultation with several bigger-scale industry owners and relevant state agencies, to prepare a retaliation plan of the whole region in response to an industrial accident that will include a breakdown of immediate and emergency measure to be taken.

Strategic Task 12.3. – Support to creation and development of sustainable timber industry system and improve general conditions in the regional forests.

Result 12.3.a: *Increase awareness of the local people and relevant staff of local self-governing bodies with issues related to sustainable management of forest resources*

Explanation. Considering the unique forest resources and biodiversity of the region, it is important to raise awareness of the local population and the relevant employees of the local self-government about sustainable forest management issues and to ensure professional development of the responsible employees of the self-governance.





Result 12.3.b: Sustainable Management of privately owned regional forests is introduced

Explanation. Introduction of sustainable management system for privately owned forest resources in the region should reduce negative impact on the forests and ecosystem in accordance with the existing legislation and sustainable management principles of the forest resources.

Result 12.3.c: Relevant forest infrastructure is created which will guarantee to satisfy the needs of the population in locally important forests and to maintain the forest resources

Explanation. Arrangement of the road infrastructure, forest-industrial roads, fire preventive paths and settling recreational zones will meet the needs of the population and also preserve forests' ecological values.

Result 12.3.d: Forestation and forest-industrial emergency measures will be implemented in priority areas on the basis of the relevant action plan

Explanation. Forest sanitation conditions should be improved (protection against forest pests) under the relevant program implementation when rehabilitation of wind-break areas/forestation actions is to be taken under the approved plan-schedule.

