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KAKHETI REGIONAL DEVELOPMENT STRATEGY

2014-2021



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DEVELOPMENT
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2014-2021

TBILISI 2013

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I. GENERAL OVERVIEW

Kakheti is an eastern border region of Georgia bounded by the Russian Federation to the north and Azerbaijan to the south. The total area of the region is 11,310 km², or 17.5% of the entire territory of Georgia. According to the Geostat data of 1 January 2013, Kakheti has a population of 405,000, or 9% of the total population of the country. Based on these data, Kakheti is the fourth largest area after Imereti, Kvemo Kartli and Samegrelo-Zemo Svaneti. The region has 9 cities and 276 villages, and the administrative centre is Telavi. Kakheti has a total of 8 administrative entities. The region has an agriculture-dominated mono-profile economy with a low level of urbanisation.

80% of the Kakheti population live in villages. The region's villages are remarkable for large population and dense settlements. The average number of population in villages is around 1,200, which is twice as large as an average village in Georgia. For the two recent years there has been a natural decrease and ageing of population in the region. The migration of young people has increased. Young people aged from 20 to 39 make up only 17% of the total population in the region. As a result of in- and out-migration, the region's population has declined 0.2% from 2002, and 7.9% from 1989.

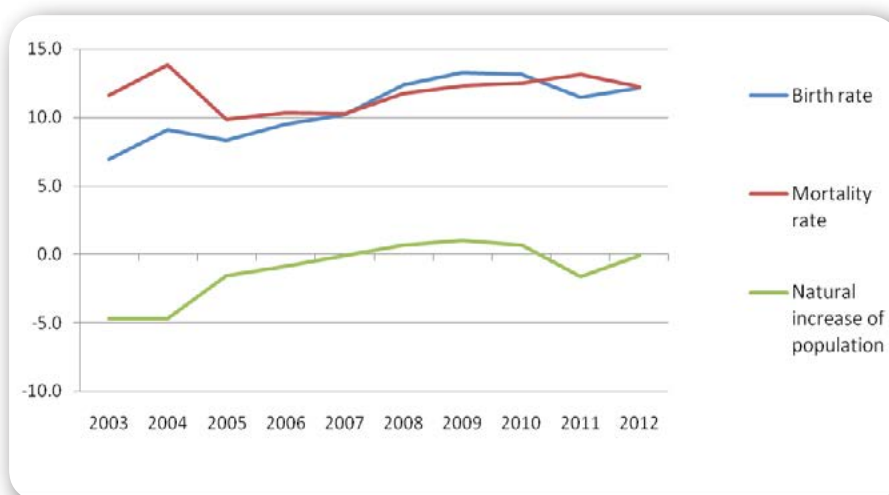
The suitable location of Kakheti, in particular, its proximity to Tbilisi and the common border with Azerbaijan turns the region into a transport corridor providing a sound basis for economic cooperation between the countries. If the number of tourists grows, the Telavi airport (which currently has only one take-off runway) may be put into operation.

11-12% of Georgia's forest area is in the Kakheti region. 30% of Kakheti's territory is covered with forests. In this regard, the region has the third largest forest area compared to other regions of Georgia. 98% of the region's forests are mountain forests of a very high ecological and economic significance.

II. SOCIAL DEVELOPMENT OF THE REGION

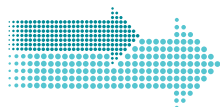
EMPLOYMENT AND INCOMES

There is a natural decrease of population in Kakheti, both in cities and villages. The death rate was higher than the birth rate in 6 regions of Georgia, while the natural decrease of population in cities was registered in three regions: Kakheti, Samegrelo-Zemo Svaneti and Racha-Lechkhumi.



Source: Calculations based on the Geostat data

Therefore, in- and out-migration of the population is obvious. Migration statistics for the region is unavailable but according to the information obtained during strategy discussion meetings, there is a whole number of deserted villages in Kakheti (in Akhmeta and Dedoplistskaro municipalities). A large part of employable workforce migrates to other cities of Georgia or abroad. In Kakheti, as well as in the rest of Georgia, there is a trend of female emigration which has a very negative impact on the demography of the population.





Due to the lack of prospects for finding a job, young people often leave the region. This leads to the ageing of population, especially in villages. Stopping the migration of young people and increasing the birth-rate is a challenge facing the region. If the ageing trend continues, the economy will not develop, the standard of living will not improve and, as a result, the government's social and healthcare spending will increase considerably.

According to the statistical data, the employment rate in Kakheti is above average. The rate of employment and activity in Kakheti is above the average level of Georgia, and the unemployment rate in Kakheti is below the average level of Georgia. This is mostly due to the number of people engaged in agriculture or self-employed.

| 2012 | Kakheti | Average rate in Georgia |
|-------------------|---------|-------------------------|
| Employment rate | 67.1 % | 56.8% |
| Activity rate | 71.8 % | 66.9 % |
| Unemployment rate | 6.5 % | 15.01 % |

Source: Geostat

48% of total population in Kakheti (199,700 people) are an employable workforce of which 13,100 (6.5%) are unemployed, and 71% (142,400 people), the largest share of active population, are self-employed people with unstable incomes largely depending on seasonality.

The economic development of the region is aimed at creating new jobs, providing the employed and self-employed population of Kakheti with a stable source of income, and increasing the competitiveness of the region.

The economic development of Kakheti is contingent on the efficient exploitation of national resources, further development of human resources and infrastructure. The growth of employment should go hand in hand with the development of child care centres and schools. Their continuous and efficient operation will provide the labour market with additional workforce (parents). Access to funding is also very important for economic growth as high interest rates on loans slow down the economy. Another important factor is the competitiveness of local products.

The growth of the region's economy requires state support in addressing problems related to the improvement of the region's business environment, protectionism of local production, development of infrastructure and financial mediation, and other issues which cannot be resolved at the level of one region only.





The population of Kakheti is employed in the government-run infrastructure projects such as construction, rehabilitation and reconstruction, road construction and maintenance, installation and cleaning of irrigation and drainage systems, etc. There is a demand workforce in this area, too, which means that infrastructure development is important for the Kakheti region.

The level of salaries in Kakheti is below average. In 2011, the average salary in Kakheti was GEL 323 while the average level in Georgia was GEL 623. Moreover, there is a clear lack of gender equality - the difference between the salaries of men and women engaged in the same area is largely favourable to men. Kakheti ranks second last, just ahead of Shida Kartli, in terms of incomes per household and per capita. Kakheti is also second last in its expenditure levels. In turn, it means a low level of consumption which slows down the economy (trade).

The source of household incomes in Kakheti, including employment incomes, is pensions (17%) and benefits (16%). The same percentage of household incomes (16%) comes from borrowings or savings account. The percentage of in-kind incomes (15%) is also high whereas the percentage of proceeds from the sale of agricultural production is lower (14%). This means that pensions and benefits, loans or savings, including natural products, make up a larger portion of household incomes than salaries.

Government spending on the vulnerable population of Kakheti is quite high. Based on the 2012 data, Kakheti ranks second after Imereti, along with Samegrelo-Zemo Svaneti, in the number of pensioners. Kakheti is first among other regions (except for Tbilisi and autonomous republic of Adjara) in the number of registrations in the database of social welfare programmes. Kakheti is second after Imereti in the number of families having a rating of 57,000 or less. Kakheti ranks highest, after Imereti and Shida Kartli, in government spending on subsistence benefits. Nevertheless, given the mechanism of targeted social assistance, families with many children often are not included in beneficiary lists. Accordingly, the number of children living in poverty is higher than the number of adults. However, this problem is relevant in Georgia, as a whole¹. The number of registered refugees and internally displaced people (IDP) is low in Kakheti compared to other regions. All registered refugees and IDPs receive assistance and benefits².

HEALTHCARE

The standard of living in the region is largely dependent on the efficiency of the healthcare sector. Effective from 1 April 2013 the government-funded comprehensive healthcare programme has been launched in Kakheti, as well as in Georgia, with the purpose of providing the population with access to free primary and emergency care. 122 rural outpatient clinics operate in Kakheti. In 2011, Kakheti ranked fourth at 1.3% among other regions of Georgia in the number of referrals to medical assistance on per person basis, the lowest level for the past 6 years. Primary care facilities are in a very poor state. Most of the facilities do not meet international standards. Very often, despite the efforts of medical staff, hygienic condition is very bad³.

In the primary care sector of Kakheti there is one doctor for 1,000 people which is a quite high ratio. At the same time, there is a lack of paramedical personnel (0.9 medical assistants per doctor)⁴. The educational level of doctors is satisfactory: 198 primary care doctors and 209 medical assistants were retrained as family physicians, i.e. 49% of the total medical staff in Kakheti. Renovated and properly equipped hospitals are available in all of the municipalities. Based on the data of the Ministry of Labour, Healthcare and Social Protection (MoLHSP), the hospital bed-population ratio in Kakheti is 95.4 per 100,000 people⁵, which is the lowest level in Georgia after Mtskheta-Mtianeti⁶.

According to the research conducted by IOM and USAID in February-June 2011, there is a lack of medical specialists in the hospital sector of Kakheti. This problem requires a complex approach and joint action by the Ministries of Healthcare and Education, along with the active involvement of higher education institutions. Opportunities for training, employing and inviting medical specialists to regions should be explored. This problem cannot be resolved only at the local government level.

1 UNICEF research "Georgia: Child Poverty Reduction", 2012

2 <http://mra.gov.ge/main/GEO#section/67> and "Economic and Social Vulnerability in Georgia", UNDP, 2013 (page 29)

3 Information provided during business meetings:

4 Healthcare Ministry data

5 The 2011 statistical data of MoLHSP National Centre for Disease Control and Public Health

6 The 2011 statistical data of MoLHSP National Centre for Disease Control and Public Health, page 62





According to the Geostat data, in 2012 emergency medical assistance was provided to 56 317⁷ people, which is a quite high figure (after Imereti, Kvemo Kartli, Shida Kartli and Adjara), primarily due to the higher quality of medical services and efficiency of the state programme.

From the epidemiological point of view, new cases of HIV infection and hepatitis have decreased. There are also positive trends in TB therapy due to the efficient implementation of various international and state programmes (anti-tuberculosis measures).

Other problems in the healthcare sector: low remuneration of hospital-based physicians, late payment of salaries, high level of self-treatment and self-medication in the population. However, the solution to these problems depends on factors which cannot be addressed at the local level.

It should be noted that the local self-government's competence is limited only to advocating a healthy lifestyle. Based on the data of six municipalities (Lagodekhi, Akhmeta, Gurjaani, Signagi, Sagarejo, Dedoplistskaro), the public healthcare cannot effectively address the existing challenges due to the limited competence and low budget. According to the 2009-2013 data, the Public Health Service in these municipalities has a very low budget not exceeding 2% of the total budget.

Although most public healthcare programmes are aimed at reducing the incidence of specific diseases, brucellosis, tuberculosis (Akhmeta, Lagodekhi, Signagi, Gurjaani and Sagarejo municipalities) and rabies (Dedoplistskaro and Signagi municipalities) are still prevalent in the region. There are often cases of water-borne diseases. The level of addiction to alcohol and drugs is high, especially among young people. There is also a problem of obesity.

Based on the 2011 data, Kakheti has the third-highest incidence of malignant tumour, after Shida Kartli and Imereti⁸. The prevalence of anaemia is quite high in the region⁹. Kakheti has the third-highest prevalence of endocrine nutritional and metabolic diseases, after Imereti and Adjara. Thyroid disease is prevalent in the region due to a lack of iodine.

7 The 2011 statistical data of MoLHSP National Centre for Disease Control and Public Health, page 60

8 The 2011 statistical data of the Healthcare Ministry, National Centre for Disease Control and Public Health, page 111

9 The 2011 statistical data of the Healthcare Ministry, National Centre for Disease Control and Public Health, page 122





EDUCATION

Education affects the quality of life as good knowledge and required skills are a necessary condition for employment.

All levels of the educational system are present in Kakheti. In 2013 there were 206 child day care centres, 192 schools (mostly public schools including several private schools), 2 state vocational colleges and 1 state university in the region. 18% of population has a degree-level qualification (higher education), and 32% has a vocational qualification.

The average ratio of teachers to children in childcare centres of Kakheti is 12/1 in accordance with the standard. The ratio is not distributed equally among municipalities (with the highest ratio in Gurjaani (21/1) and the lowest in Signagi 10.48/1). Only 40% of child day care centres has been renovated and restored despite the growing number of children in day care centres¹⁰.

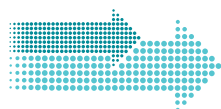
In 2006-2012 the number of children in secondary schools of Kakheti was declining¹¹: a sharp downward trend was registered in certain municipalities (e.g. Gurjaani, Kvareli, Telavi), whereas in a number of municipalities (Akhmeta, Dedoplistskaro, Sagarejo, Signagi) the decrease was only within a range of two hundredths. Although the public schools of Kakheti are ranked in 7-8 star category based on the branding system, the data of the Georgian Ministry of Education and Science show that 28% of schools are still in need of reconstruction, 18% of schools are fully renovated, and 53,51% schools of Kakheti are half renovated. The school infrastructure is the best in the Kvareli municipality, and the worst in Gurjaani and Lagodekhi.

The infrastructure and training facilities of two vocational colleges in the Kakheti region is satisfactory. Based on information provided by the vocational institutions, in 2006-2012 the number of students in both vocational colleges was fluctuating, but with an overall upward trend, which demonstrates the popularity of vocational education among the population. Based on the data of the educational institutions, 40% of college graduates find jobs in their area of specialisation. However, according to the research of IOM and USAID in February-June 2011, such popular specialisations as waiter, baker, welder, sales consultant, agricultural machinery technician, irrigation technician, zootechnician and other specialisations (the course is provided only by the Telavi vocational college Prestige) are not available in Kakheti¹². The research also

10 In 2012, at the request of UNICEF, Geostat conducted a research regarding the condition of pre-school institutions in the municipalities according to which childcare places are available to 93% of preschool children in villages of Kakheti and to 83% in the city, which indicates a lack of childcare places. It should be noted that the number of children is merely an estimate as there are no exact data.

11 Official data of the Ministry of Education and Science of Georgia, see the table "Education".

12 Source: Supply of workforce to the Georgian labour market - conclusions of the February-June 2011 research | IOM, USAID





discusses problems related to the employment of people with degree-level qualifications. According to the research, the most popular and sought-after specialisations in Kakheti are: agronomist, foreign language specialist (translator), project, financial and marketing managers, various specialists - physicians, civil engineers (roads, bridges and buildings), mechanical engineer, hotel manager, pharmacist, pharmacologist, teachers of various subjects, entomologist (plant protection specialist) and soil expert¹³. It should be noted that there is no similar research of the Kakheti labour market.

The only higher education institution in the Kakheti region has three levels of academic degrees: bachelor, master and doctor. The Telavi State University has four renovated buildings and a solid infrastructure. However, according to the information obtained from the University, after the reform in 2006-2011 the number of students in the Iakob Gogebashvili State University of Telavi has been decreasing, with a high of 2101 (in 2006-2007) and a low of 1189 (in 2007-2008). Today, the University has 348 sponsored students, or 21% of all students. The remaining 79% of students pay their own tuition fee.

There is a quite good framework for informal education in Kakheti: 91 libraries, 30 museums and 46 cultural centres, including various sport facilities, music and art school, craft shops, but most of these facilities are in a state of disrepair.

No accurate data are available about private training centres and training courses in Kakheti. It is only known that such training courses are provided in Telavi by the so-called full-service translation agencies which offer various professional development courses to adults (e.g. accounting and audit with the relevant software, foreign languages, computer programmes, etc.). Private training centres tend to hire cheap specialists to avoid any effect on the price of training courses and number of course participants. Their training programmes are often limited and do not meet the labour market needs. Yet, as a rule, professional development courses should be more flexible, adaptable and responsive to the labour market needs. Relatively high quality training is offered by Tsona Ltd which has a branch in Telavi.

The general, higher and vocational education system is within the competence of the central government. It is governed by the law of Georgia on General, Higher and Vocational Education, and is funded by the central government. Pre-school education is within the competence of local self-government in accordance with the organic law of Georgia on Local Self-Government of Georgia, and is funded by the local government.

III. ECONOMIC DEVELOPMENT OF THE REGION

ECONOMY (EXCLUDING AGRICULTURE)

PRODUCTION

As Kakheti is an agricultural region, the share of non-agricultural economy in the gross value added (GVA) of the region and in the gross domestic product of the country is small. The level of urbanisation is low in Kakheti due to the mono-agrarian character of the region which means that Kakheti will not shift its focus to industry in the near future. In 2011, agriculture accounted for 24% of the region's GVA, while the share of industry was only 9%, trade was 5%, transport and communication - 1,2% and construction - 1,7%. It is noteworthy that there are no data available about the share of tourism, whereas the share of various service sectors in 2011 was high (20%). The aggregate share of other sectors was 38%.

The recent growth of construction has spurred the production of local construction materials (bricks, tiles, building blocks, etc.). There are mining and processing industries in the region: mining and processing of slate and marble, mining of limestone in the municipalities of Telavi and processing of limestone in the municipalities of Dedoplistskaro. The limestone is supplied to the Rustavi cement plant. However, this segment of industry faces some challenges such as the high cost of financial resources, the dominating share of trade loans in the loan portfolio of financial institutions, which indicates a lack of credit resources in the production sector. In addition, interested parties have no opportunity to get advice on issues related to the optimisation and development of production such as credit and tax issues, business plans, product marketing, etc.

TOURISM

The concentration of historical sites, famous wine cellars, natural resources, cultural and historical heritage





sites, and the geographical location of the region provide a great potential for the development of tourism in the region. The development of tourism is largely dependent on the improvement of service sector in the region.

Around 30 hotels of different levels (including the expensive hotel Ambassador, Lapota, Dzveli Telavi, Kvarlis Tba), more than 100 small hotels and guest houses, around 70 catering facilities, restaurants, café-bars, pizzerias. etc. (being only 3.4% of similar facilities in Georgia), and 15 travel companies operate in the Kakheti region. Room rates range from GEL 10-15 to GEL 350 in the region.

The level of service, standards and staff shortage is a problem faced even by expensive hotels. It should also be noted that hotel owners do not provide statistical agencies with accurate data on occupancy rates so it is difficult to determine the total number of visitors.

In 2013, the flow of tourists to Telavi is expected to increase considerably (the recently renovated Telavi is becoming a popular destination). However, these are mostly low-budget tourists. Therefore, attraction of high-budget tourists remains a challenge for the region.

The natural biodiversity of Kakheti provides an opportunity for the development of recreational tourism in Akhmeta, Gurjaani, Telavi, Sagarejo, Signagi and Kvareli municipalities. It is important to develop adventure tourism in Akhmeta, Dedoplistskaro, Lagodekhi municipalities, eco-tourism in Akhmeta, Dedoplistskaro and Lagodekhi municipalities, and agricultural tourism in all municipalities of Kakheti.

The realisation of the region's potential will make it possible to develop travel services based on the unique wine-making techniques, cultural and historical heritage of the Kakheti region. Fascinating landscapes and protected areas offer opportunities for mountain, horse and eco tourism.

There are a lot of pre-Christian sites in the region (e.g. remnants of ancient towns with regular layouts dating back to 9-14 centuries B.C. were discovered in the Gareji desert). Balneotherapeutic health resorts are located in Gurjaani (Akhtala) and Sagarejo (Ujarma). Their potential needs to be explored. Rare micro-climate areas should also be explored and developed into a tourist destination (e.g. Tsivi Mountain, Kodi Mountain (its climate is no worse than that of Bakuriani, village Mariamjvari (Sagarejo) etc.).





In order to promote tourism, it is important to explore new routes and conduct a whole number of marketing events which requires joint efforts of people engaged in this industry. Further development of the industry should be based upon international best practice. Professional tourist association(s) should be established to lobby the industry interests.

INVESTMENTS

Investments should be attracted to the industries in Kakheti which have a potential for job creation, development of local and export markets, such as agricultural production and tourism. Investments in the development of the industries are of paramount importance as they lead to the introduction of modern technology and optimization of human resources along with the inflow of funds. Agricultural investments should be targeted to the development of production, rehabilitation of irrigation network and organisation of supply chain which will connect producers, intermediaries and end consumers. Investments should be attracted to a number of plants such as construction materials producing plants, provided that the feasibility of such investments is confirmed by preliminary studies. Investments in alternative energy sources will help to reduce the cost of energy and make it more affordable to consumers.

AGRICULTURE

AGRICULTURAL LANDS OF THE REGION

38 % of Georgia's agricultural land is in the Kakheti region, where arable lands and pastures occupy the largest area. Kakheti ranks first in Georgia in this category of lands and is therefore a leading region in the production of cereals and livestock.

Dedoplistskaro is the largest municipality in Kakheti with the largest area of agricultural lands, followed by Akhmeta, Sagarejo and Signagi. The table and chart below show the data of agricultural lands in each municipality and their distribution. Only 20-25% of land owners have registered their agricultural lands in the National Agency of Public Register while others cannot afford registration fees. The survey of farmers showed that only 2-4% of land owners have registered land as their property where they grow various crops. There are often disputes over ownership between citizens or between citizens and the government.

It is noteworthy that farmers do not take good care of soil and do not enrich it with a sufficient amount of mineral or organic fertilizers. Due to the poor management of soil, lands are often infested with weeds. Due to a large number of animals grazing on pastures there is a process of desertification, especially in Sagarejo and Dedoplistskaro. Most agricultural lands are affected by soil erosion caused by wind and water.

The greatest threat to the agricultural lands of Kakheti is posed by the Alazani River in the area of Georgia-Azerbaijan border. For the past 15 years the river has flooded more than 100 hectares of arable and pasture land, and such losses increase annually. As a result, the local population loses a significant part of incomes from livestock and agricultural crops. The massive spread of pests in the soils of Kakheti that damage the new vineyards has also become dangerous. As a consequence, efforts to develop this area turn out to be unsuccessful. Although in 2009-2011 the National Food Agency took measures to prevent the spread of locusts, there are still certain areas where such measures were not undertaken.

The disputes will be resolved by making inventory of agricultural lands and identifying their owners. Farmers will be motivated to cultivate and enrich soil. As a result, agricultural lands will be managed more efficiently in the longer term.

VITICULTURE

Kakheti is a unique ancient vine-growing and wine-producing region. It has unique microzones that traditionally produce wines of origin appellations and other high-quality Georgian wines.

Today, around 65–70 % of all vineyards in Georgia are concentrated in the Kakheti Region. Kakheti ranks first in the area of vineyards (33,582 ha), followed by Imereti and Shida Kartli.

The total area of vineyards in Kakheti is 33,582.5 ha. Gurjaani has the largest vineyards in Kakheti with the total area of 7,618 ha, followed by Kvareli - 6,382 ha, and Telavi - 6,048 ha. The smallest area of vineyards is in Dedoplistskaro - 1,499 ha, and Akhmeta - 1,747 ha.





50-60% of the existing vineyards in Kakheti were planted during the Soviet period, and the remaining part has been planted since 1994-1995. Due to the wide spacing between rows in old vineyards, per hectare yield and quality of grapes is low – not more than 2–2.5 tonnes/ha. It is noteworthy that 14 out of 18 appellations of wines in Georgia are produced only in Kakheti.

There was a considerable decline in the export of Georgian wines in 2006 and 2009 due to the embargo imposed by the Russian Federation, followed by a relatively steady upward trend in 2010 and 2011.

Georgian wines are exported primarily to the post-Soviet countries. In 2005-2012, the largest quantity of wine was exported to Ukraine, Kazakhstan and Belarus, and the least quantity was exported to the Kyrgyz Republic, Turkmenistan, Uzbekistan and Moldova.

Georgia also exports other alcoholic drinks produced from grapes, such as brandy, cognac and vodka (chacha). In 2009-2012, 10 post-Soviet republics were the major market for the products. A steady upward trend is observed in the aggregate exports of Georgian brandy and vodka, mostly to Ukraine, Belarus and Uzbekistan, while exports to other countries are erratic and unstable with an overall downward trend.

Post-Soviet countries remain the primary export market for Georgian unbottled wines. The largest quantities go to Ukraine, Belarus, Azerbaijan and Armenia. In 2009-2012, exports showed a steady upward trend. Small quantities of unbottled wines were exported to Tajikistan, Kyrgyz Republic and Latvia. In 2009-2010, unbottled wines were exported only to China, in addition to the post-Soviet countries, but in 2011 the exports to China stopped.

Wines of origin appellation account for the largest share of Georgian wine exports. They are produced in specific areas and are very popular among consumers. In 2009-2012, exports of appellation wines showed an upward trend increasing from 3.2 million bottles to 6 million bottles. The share of appellation wines is stable ranging from 27.4 to 29.5% in total exports of Georgian wines, and wines produced in Kakheti appellations account for 79-82% in total exports of appellation wines. There are many family-run wine cellars in Kakheti representing small and mid-sized wineries.. Some wine cellars are built according to the traditional architecture and equipped with modern technological equipment, but a majority of the wineries are artisan facilities. Sales of wine produced by family-run wine-cellars total 40-160 tons per year. Proceeds from the sale are a quite good source of income for households. Small producers find it difficult to expand their production, to ensure high quality of wine and develop the sale market. One of the obstacles to the development of wine cellars is the lack of knowledge of modern technology. Family-run wine cellars face serious competition from large wine-producing corporations. Thus, the state should support the development of small and mid-sized wineries. Focus on market alone is not sufficient for the increase of the export potential and development of small and medium-sized production. It is also important to improve the quality.





PRODUCTION OF CEREALS

Kakheti has a long history of cereal production thanks to the fertility of land and diversity of cereal crops. Kakheti is a leading wheat-producing region with a large area of land under wheat.

Kakheti has the largest area of land under wheat compared to other regions but this area has been decreasing year by year. In 2007, Kakheti had the largest crop of wheat - 62 thousand tons; in 2009-2010 there was a sharp decline in wheat yields which increased again in 2012.

Wheat production by regions, thousand tons

| Region/year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---------------------|------|------|------|------|------|------|------|
| Georgia | 69.7 | 74.9 | 80.3 | 53.9 | 48.4 | 96.8 | 80.7 |
| Shida Kartli | 8.5 | 4.7 | 11.3 | 19 | 11.1 | 23.8 | 8.5 |
| Kakheti | 42.7 | 62 | 52.7 | 22.2 | 23.6 | 47.1 | 53 |
| Kvemo Kartli | 14.1 | 5.5 | 12.4 | 8.7 | 9.8 | 17.3 | 14.9 |
| Other regions | 4.4 | 2.7 | 3.9 | 4 | 3.9 | 8.6 | 4.3 |
| Share of Kakheti, % | 61.3 | 82.8 | 65.6 | 41.2 | 48.8 | 48.7 | 65.7 |

Source: Geostat

Although the area of land under wheat in Kakheti is larger than in other regions, its average per-hectare yield is very low. There are no statistical data available about the production of wheat seeds and seed farms in the Kakheti region but based on data about the consumption of wheat seeds throughout the country we can establish an estimated amount of wheat seeds consumption in the region. The standard widespread varieties in Kakheti are: *Triticum vulgare* 1, copper, spartanka and other.

Among autumn cereal crops of Kakheti, barley is the second most important cereal crop used primarily for animal feed. Georgian breweries do not use locally produced barley but import it from other countries.

The comparison of the 2006-2011 data in the table demonstrates that barley crop was more or less stable in Kakheti and declined slightly in Samtskhe-Javakheti. However, Kakheti is still far behind this region in the amount of barley production. As both of the regions are the largest producers of livestock, barley production is quite important here so there is a great potential for its growth. Farmers in the Dedoplistskaro and Signagi municipalities produce a relatively large amount of barley whereas farmers in the other municipalities of Kakheti produce barley for feeding their own livestock.

Barley production by regions, thousand tons

| Region/year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------|------|------|------|------|------|------|------|
| Georgia | 30.6 | 40.3 | 49.3 | 19.9 | 23.3 | 30.3 | 20.7 |
| Shida Kartli | 3 | 6.2 | 4.7 | 3.6 | 3.3 | 9.5 | 7.3 |
| Kakheti | 12.4 | 12 | 18.7 | 3 | 6.7 | 9.4 | 5.9 |
| Kvemo Kartli | 4.4 | 2.2 | 0.6 | 1.3 | 0.4 | 0.8 | 2.9 |
| Samtskhe-Javakheti | 10.2 | 19.7 | 24.6 | 11.6 | 12.9 | 10.4 | 4.1 |
| Other regions | 0.6 | 0.2 | 0.7 | 0.4 | 0 | 0.2 | 0.5 |
| Kakheti, % | 40.5 | 29.8 | 37.9 | 15.1 | 28.8 | 31.0 | 28.5 |

Source: Geostat

Corn is the most important crop in Georgia. Since 2006 Kakheti has become the third region in Georgia in terms of area under corn, preceded only by Imereti and Samegrelo-Zemo Svaneti.

Corn is widely used in the livestock sector. The share of white corn production is insignificant. Corn stalk is used for animal feed in winter and for the production of silage. Standard high quality seeds are a significant contributing factor to the increase of seeds production and incomes of farmers.

Since 2010 the government has encouraged corn production in Kakheti. The country has imported a hybrid variety of corn from Pioneer Company which was distributed among farmers on the basis of agreements and under appropriate conditions. A corn drying plant with a full technological cycle was built in the Lagodekhi municipality. Although the programme failed to meet the farmers' expectations, the corn crop was used for





the production of rectified spirit. Today, spirit producing plans in Kvareli and Telavi use local corn and a small quantity of wheat for this very purpose.

Sunflower is another important industrial crop for the Kakheti region, especially in the Dedoplistskaro and Signagi municipalities. Traditionally, this crop was a significant source of income both for farms and households. For the past 10 years, the area of sunflower fields has sharply declined and now occupies only a small area.

Area of sunflower fields

| Municipalities | Total arable land, ha | Area of sunflower fields, ha | Share of sunflower fields in arable lands, % |
|----------------|-----------------------|------------------------------|--|
| Akhmeta | 16,354 | 885 | 5.4 |
| Gurjaani | 19,288 | 205 | 1.1 |
| Dedoplistskaro | 50,514 | 3,306 | 6.5 |
| Telavi | 16,327 | 243 | 1.5 |
| Lagodekhi | 24,971 | 70 | 0.3 |
| Sagarejo | 29,575 | 865 | 2.9 |
| Signagi | 22,675 | 2,169 | 9.6 |
| Kvareli | 16,534 | 52 | 0.3 |
| Total | 196,237 | 7,795 | 4.0 |

Source: Presidential Envoy's State Administration in the Kakheti region

The area of sunflower fields has decreased considerably. The per hectare yield (700-950 kg/ha) and production is also low. Sunflowers as well as other agricultural crops are generally produced for home consumption for two purposes: firstly, for seeds - reproduction, and secondly, for the production of sunflower oil. The existing "artisan" oil mills in the rural areas of Kakheti produce oil for food, and its residues are used to produce oilseed cake, the energy-rich feed source for livestock and chickens.

In 2004-2005, the area of land under sunflower was more than 35 thousand hectares, of which 45-50% or 17 thousand hectares were in Dedoplistskaro. Despite the low yield, Dedoplistskaro was and is a leading area in sunflower production... There was a period when 80-85% of sunflower produced in Georgia came from Dedoplistskaro.

Sunflower production has a great potential as the domestic demand for vegetable oil is increasing every year and is met mostly through imports. Today, the largest share of sunflowers (95-98%) is produced by households, and the remaining 2-5% is produced by agricultural enterprises.

Based on the comparative analysis of 2010 made by the Ministry of Economy and Sustainable Development, vegetable oil is imported from 51 countries, mostly from Ukraine, Russian, Azerbaijan and Turkey. In 2007, oil imported to the country accounted for 96% of total consumption, with the share of domestic oil being only 4%. Domestic producers of vegetable oil are: Karva Ltd, Mamont Ltd, Batoil Ltd, George and Others Ltd, of which only Karva and Okros Kandelia are Georgian brands.





The table demonstrates a sharp difference between the imported and domestic vegetable oils. Although exports reached 1,100 tons in 2007, the amount of imported vegetable oil during the same period was quite large being 31,385 tons.

Today, domestic production of sunflower oil is quite small compared to imported oils. The price of domestic sunflower oil extracted in artisan mills is 3-6 litres per litre. Unfortunately, the extracted oil is used for falsification of imported oil produced from corn or other crops, i.e. foreign vegetable oil imported to Georgia is added to locally produced oil which is then offered for sale on local agricultural markets as “sunflower oil”.

There were very good seed nurseries and seed testing farms in the Kakheti region - Ulyanovsky Demonstration Farm of the former Agricultural Research Institute, including seed nurseries and seed testing farms in Tsnori, Bakurtsikhe, Telavi which provided farmers with standard and elite seeds. However, such farms no longer exist today. The Kakheti region which has land resources required for ensuring the high yield of cereals and high quality of production is not fully involved in the national food supply.

VEGETABLES AND MELONS

Kakheti is a leading region of Georgia in the production of melon crops (strawberries, watermelons, melons and pumpkin). Production of melon crops is one of the most profitable areas in agriculture. This sector of agriculture, as well as production of vegetables, has a great potential in Kakheti.

In 2006-2011, the area under crops in Kakheti has slightly decreased. The highest production of 41 thousand tons was reached only in 2007 with a steady downward trend in subsequent years.

Kakheti, in particular, Lagodekhi, Kvareli and Gurjaani municipalities are hazelnut (peanut) producing areas. These areas have a great potential as their soil and micro-climate are favourable for the expansion of hazelnut (peanut) production. Today, peanuts are grown manually. Appropriate mechanisation and use of high-yielding varieties and state-of-the art technology would contribute to the considerable growth of production. The production of this crop is a profitable and promising area given the high price and high demand in the local market. If the resource base of this crop is expanded, investments will be made in the establishment of peanut processing and packing plants.

Kvemo Kartli has traditionally been a leader among other regions in the production of vegetables, followed by Kakheti, with the exception of 2010 when the harvest was only 300 hectares.

The major producers of vegetables are Lagodekhi, Gurjaani and Signagi municipalities. The micro-climate, fertile soil and traditions existing in this area are attractive for local farmers.

Production of vegetables and melons is the most profitable area among other areas of agriculture despite the fact there are less opportunities for generating profits due to the challenges existing this area. The challenges of the area, their reasons and consequences are presented in a table.





POTATO GROWING

Today, potato is an important agricultural crop and a major source of food for the population. The leading potato-growing regions are Samtskhe-Javakheti and Kvemo Kartli. Although potatoes are mostly grown in households, the fertile soil, favourable agricultural and climatic conditions, especially in the villages of the Tusheti and Gombori Pass, are favourable for the production of this crop.

According to the data of the Office of National Statistics, the production of local potatoes accounted for 42,6-89,5% of the potato sector in various years with a rapid growth in 2006 - 2011, whereas the import of potatoes has sharply declined accounting for 0.8% of the potato sector in 2010 and increasing to 15,2% in 2011.

According to the Geostat data, demand for potatoes in the domestic market is partly met by the local production, in particular, from Samtskhe-Javakheti and Kvemo Kartli.

Despite the dominating role of these regions in the domestic potato market, there is also a certain potential for the development of this segment in Kakheti, in particular, the bio-potato segment. Arable lands of the Dedoplistskaro, Tusheti and Gombori Pass have a great potential not only for the production of potatoes, but also for the growing of other agricultural bio-products.

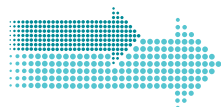


FRUITS

Kakheti produces a large variety of fruit. The agricultural and climatic conditions and fertile soil are favourable for the fruit-growing. Gurjaani, Lagodekhi, part of Telavi, Signagi and Kvareli have the greatest potential in this regard. Gurjaani specializes in the production of peaches. Persimmons, plums, apples and other varieties of fruit are produced in Lagodekhi. Canning industry has a perfect resource base, but it needs to be expanded and diversified according to the market demands. Production of fruit plants is small-scale in Kakheti but production of stone fruit is the highest among other regions - 9.6-3.8% (in 2006-2011).

Peaches account for a major share of stone fruit, as shown in the table below.

Kakheti is the top peach producing region in Georgia with the share of production ranging from 39,6 to 76,8%. The major fruit-producing municipality is Gurjaani, followed by Telavi, Signagi and Kvareli. Peach production has





increased sharply for the past 15 years. The Kakheti region does not concentrate on the production of fruit plants, although it has a quite good potential in this regard. In addition to the production of stone fruit, in particular, peach, a wide variety of fruit that can be used in the canning industry are grown in the Kakheti region during various seasons. We should note the specific characteristics of the canning industry such as possible damage to certain varieties of fruit as a result of drought or hail which may lead to the suspension of the canning industry. However, due to the favourable soil, agricultural and climatic conditions of the region there is a possibility for expanding the resource base for the canning industry thus reducing the risk.

LIVESTOCK

Livestock has traditionally been an important component of the agricultural industry of Kakheti. Large areas of pastures and grasslands, favourable agricultural and climatic conditions are major factors contributing to the development of this sector.

Although Kakheti accounts for a small share of the total livestock population in the country, this sector has a great potential for development. The region's strength is its proximity to the capital city.

Kakheti ranks fifth with a share of 9% after Imereti, Samegrelo, Kvemo Kartli and Samtskhe-Javakheti.

Cattle-farming is an important part of Kakheti's livestock sector. The cattle stock in 2012 is presented in the table below. Among the other municipalities of Kakheti, Telavi has the smallest stock of cattle - 8.6 thousand, and Sagarejo has the largest stock - 24.6, followed by Lagodekhi, Dedoplistskaro, Signagi and Kvareli.

The cattle stock in Kakheti is higher than in previous years, especially in households where it is 99.3 - 99.8%, with the remaining share belonging to agricultural enterprises.

Each municipality of Kakheti has livestock driveways which link together winter and summer pastures both inside and outside the region. The driveways are measured according to: driveway, cattle stall, area of driveway (in hectares), length of driveway (km). Unfortunately, the disorder prevailing on livestock driveways causes many problems both to farmers and the state such as spread of very dangerous animal diseases in the region and in the country, as a whole, unfavourable epizootic condition and increasing risks in the livestock sector of the region.

Kakheti ranks fourth in meat production after Imereti, Samegrelo, Kvemo Kartli and Shida Kartli. There was a decline in meat production in 2006-2011 until 2010, with an upward trend in 2011, which is due to the improvement of state registration service.

Meat is produced by officially operating slaughter-houses that have the required permit. The slaughter-house of Karajala village in Telavi funded by USAID sells 2-4 tons of meat per day and 60-120 tons of meat per month depending on seasonality. It is equipped with modern production line and cooling chamber. We should also mention the slaughter-houses of Lagodekhi, Velistsikhe, Iormuganlo and Vardisubani including butcher shops along the Bakurtsikhe-Tbilisi highway which slaughter and sell cattle.

The situation in other slaughter-houses of the region is very poor: hygiene practices are not followed; there are no sewer and water-supply systems, no cooling chambers for storage of meat, and no laboratories at the site; slaughter-houses are not isolated from market areas; the major problem is the absence of local oversight agencies and the inability of Food Standards Agency to control the quality of production.

Kakheti accounts for a smaller share of milk production than Imereti and Kvemo Kartli or other regions. However, milk production is one of the most important sources of livelihood for the Kakheti population and accordingly, has a potential for growth. The table below shows Kakheti's share in the production compared to other regions.

Kakheti accounts for 6.1-6.8% of the total milk production in the country, with a potential for growth. Demand for milk is constantly growing. In fact, liquid milk is in short supply in the domestic market. To a certain extent, this shortage paves the way to the growth of dairy breeding in a favourable business environment. Local farmers having 3-6 or more cows produce their own Sulguni or other type of cheese from which they earn more income.





Akhmeta, Sagarejo, Signagi, Lagodekhi and Dedoplistskaro have traditionally been the largest milk producers in Kakheti. Milk is also produced by other municipalities but in a smaller amount than in the above-mentioned region.

Local producers of milk and dairy products such as Sante, Ecofood, Soplis Nobati and other companies operating in the Kakheti region do not buy milk in Kakheti as the region cannot meet their daily demand. Other regions are also unable to supply sufficient milk so the companies make up for the shortage by using milk powder.

Pig-breeding is one of the most ancient branches in Georgia. Today, the top pig-producing regions are Imereti, Samegrelo, Kvemo-Kartli and Zemo Svaneti, including Kakheti. Pig production suffered a great damage due to the outbreak of swine flu.

Kvareli has the largest pig population in Kakheti (4035) followed by Dedoplistskaro (3815), Sagarejo (3421) and the smallest in the Akhmeta municipality (700). There are different breeds of pigs in Kakheti, among them the “Kakhetian breed” is on the brink of extinction. Unfortunately, there are no breeding farms in Kakheti where farmers can buy pure-bred pigs.

Kakheti plays a special role in pork production. There is a great demand for pork in the domestic market which peaks in December and January. Although local pork is more expensive than imported pork, it is still in great demand in the country. Today, Kakheti accounts for 10,5-14,1% of pork production in the country.

Pork is primarily produced by small farms so proceeds from the sale of pork are a very important source of livelihood for this segment of producers. Pork production will increase with the improvement of epizootic condition.

There are the following constraints to the development of meat production and other livestock sectors:

- Deficiency of legal regulations on control of meat quality
- Unfavourable epizootic condition in the region and in the country
- Inefficiency of veterinary system in the region and in the country
- Low nutritive value and high cost of fodder
- Lack of high-yield breeds
- Inefficiency of product quality control system
- Poor infrastructure in butcher shops;
- Big influence of monopolistic companies in the domestic meat market

Kakheti has a long history of sheep-breeding and in general, livestock production traditionally pursued by farmers in Akhmeta, Dedoplistskaro and Sagarejo due to the availability of large winter and summer pastures which have been and are major contributing factors to the development of this sector. Today the sheep population is lower than before. Kakheti is actually a top sheep-producing region followed by Kvemo Kartli where the sheep population was not large in previous years but was steadily increasing for the last 12 years.

Among the other municipalities of Kakheti, Akhmeta (67.5 thousand sheep) and Sagarejo (96 thousand sheep) are leaders in sheep production. The growing demand for Tusheti sheep in the Arab countries has caused a sharp increase in the sheep population encouraging farmers to produce more sheep. However, the outbreak of dangerous animal diseases poses a great risk for export.

Sheep is primarily produced and consumed at a local level. The sheep meat is imported in the form of various tinned food or products, and the remaining part is produced locally. Although the country has been exporting live sheep for the past four years, primarily for meat production, there are no sheep producing and processing plants in the region. It should also be noted that export data were unavailable at the time of research. The table below shows the amount of sheep produced where Kakheti is at the top, followed by Kvemo Kartli, Samtskhe-Javakheti and Mtskheta-Mtianeti.

Sheep production is one of the most profitable sectors as annual stocking rates of sheep are quite high. Production of sheep cheese is quite profitable due to the high price. Moreover, sheep wool is a raw material used in the textile industry. Although the price of wool is lower today than in previous years, it still provides some source of livelihood.





The constraints to the development of this sector are as follows:

- Unfavourable epizootic condition in the region and in the country
- Inefficiency of veterinary system in the region and in the country
- No adherence to hygiene practices during the milk and cheese production in farms.
- Low nutritional value of winter and summer pastures, partial desertification of pastures.
- Inefficiency of product quality control system
- Poor infrastructure in butcher shops;

POULTRY BREEDING

The demand for poultry meat, especially chicken and eggs is constantly growing in the domestic market. In fact, domestic production is unable to meet the demand making up for the shortage through imports.

The table below shows poultry stocks by regions. As you can see from the table, Kakheti accounts for a small portion of total poultry stock (15-17,1%) with Kvemo Kartli at the top and Shida Kartli at the bottom. The outbreak of avian influenza in 2005-2006 had a negative impact on the poultry industry resulting in a sharp decline of both poultry and egg production.

Poultry is mostly raised in households. There are also two poultry plants: in Sagarejo, village Patardzeuli and in Sagarejo which specialises in egg production. Broiler chickens are raised in Kakheti, as well as in other regions, mostly for household consumption. There was a large poultry plant in Telavi which is inoperative today. Kakheti has a great potential for the supply of poultry meat to the capital city and large cities of the country thus replacing a portion of the imports.

Poultry production is small-scale in Kakheti ranging from 10.1-12.1%. Imereti and Samegrelo are top producers, and Shida Kartli has the smallest production. In Kakheti, as well as in whole Georgia, poultry is raised mostly for egg production and household consumption. In fact, local production of poultry meat is small-scale and insufficient to meet the domestic market demand which is partially satisfied through imports.

According to the data of the National Office of Statistics, domestic production remained stable at around 12.9 thousand tons during 2006-2011, whereas imports showed a nearly double increase in 2006-2007 and a steady growth in subsequent years reaching a high of 40.8 thousand tons in 2010. Imports of poultry meat were up from 57% to 77,6%, with a steadily growing demand which provides a basis for sustainable growth of this sector.

Compared to other regions, Kakheti accounts for 13,6-18,1% of egg production with a downward trend: egg production was down from 18.1% in 2006 to 13.6% in 2010 rising again in 2011.

The decrease in Kakheti is due to the higher productivity of poultry plants in Kvemo Kartli where the government and a small group of investors have effectively launched the Kumisi poultry plant which is the largest egg supplier in the domestic market.





Unlike the poultry production sector where imports are high, the situation in the egg production sector is different. According to the data of the National Office of Statistics, imports were decreasing in the period between 2006 and 2010 /down to 2.2%/ with a corresponding increase in the domestic production /up to 96.9%/. In fact, the domestic production nearly doubled during 2006-2010 going up to 445 million eggs. There is also an increase in egg consumption up to 433 million eggs by 2010.

BEE-KEEPING

Bee-keeping has a long tradition in Georgia, especially in Kakheti. Compared to other species of bees, Georgian bees are recognised in the world for their unique medical and other beneficial properties.

Kakheti accounts for a quite small percentage of bee-keeping industry in Georgia where Samegrelo, Imereti, Adjara and West Georgia, as a whole, have a leading position.

Honey is sold in the local market seasonally with a peak in December-January. Due to the lack of data on honey export, it is impossible to tell what countries the honey is exported to and in what amount. Honey export will be a major contributing factor to the development of this industry as it has a great potential.

In addition to the potential for the growth of honey production, the industry is also important for the production of medications which is one of the unique areas in bee-keeping. A wide variety of plants in the forests and fields of Kakheti and seasonal bloom is one of the key factors contributing to the production of high-quality honey.

The number of bee colonies in the Kakheti municipalities is presented in the table below. Kvareli, Signagi and Gurjaani are leaders in the bee-keeping sector, and Akhmeta has the smallest number of bee colonies. The above-mentioned municipalities are large honey producers in the region. The Lagodekhi municipality has a great potential for the development of bee-keeping industry as its forests and fields are favourable for honey production.

AGRICULTURAL EQUIPMENT

The agricultural equipment in the region is mostly outdated and beyond its useful life. A major part of the old equipment was produced in Russia or Belarus. In fact, no agricultural equipment has been imported from these countries since the 90s of the last century, with a few exceptions. The demand for high-quality agricultural equipment in the country has increased over the past 15 years. However, the private sector does





not have sufficient funds for investments in modern technology. The international and donor organisations USAID, MCG, GTZ and the Embassy of Japan have implemented several projects to make up for the shortage. However, the Georgian agricultural sector is still in need of modern technology.

MELIORATION SYSTEM OF KAKHETI

Irrigation of agricultural lands in Kakheti is provided by United Amelioration Systems Company of Georgia. This company has four structural divisions in the region: Zemo Alazani, Kvemo Alazani, Lagodekhi-Kvareli and Kvemo Samgori structural divisions which provide irrigation water to all municipalities of Kakheti.

There were several irrigation networks in Dedoplistskaro: Zilicha Pirveli, Tarabani and Telatskali mechanical irrigation systems. 6,000 hectares were irrigated by Zalicha Pirveli from the Alazani river, Tarabani area was irrigated by pump station on the Iori river. These systems are no longer functional. The agricultural lands of Sagarejo were irrigated by mechanical irrigation systems. These systems are unusable today.

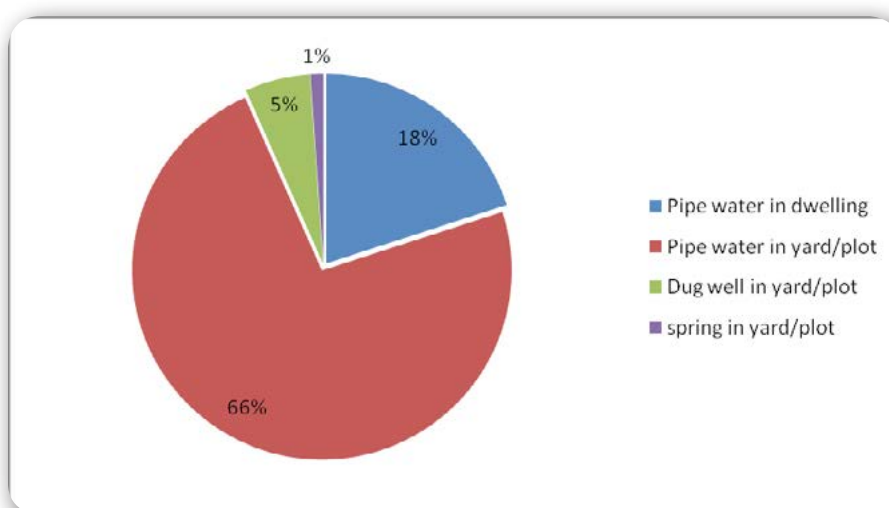
IV. INFRASTRUCTURE

Infrastructure provides a basis for the competitiveness of the Kakheti region and higher standard of living for the local population, including people with disabilities. The standard of living in the region is evaluated based on the quality of drinking water, local roads, condition of public transport, management of solid waste, availability of electricity, natural gas and telecommunications.

It is noteworthy that certain improvements to the Kakheti infrastructure have already been made, including the renovation of Signagi and Telavi. Rehabilitation of roads and waste disposal sites is funded by the central government, street lighting and supply of water to villages is funded by the local government, and electrification, supply of water to cities, gasification, communication and public transport is entirely within the responsibility of the private sector.

99.7% of electricity in the regions of Kakheti is supplied by Kakheti Energy Distribution Company, Ltd, and water is supplied by United Water Supply Company of Georgia, Ltd. However, a large part of villages use gravity water and artesian wells. Only Signagi and Lagodekhi have 24-hour water supply in the region. The other cities are supplied water on schedule. Water tax administration is not regulated in villages, which makes things even worse. There are frequent outbreaks of water-borne diseases (source: information provided during public meetings).

Distribution of households by type of the main source of drinking water in 2010



Source: World Bank, Georgia Urbanisation Review 2012

Sewer system is not well developed in the Kakheti region. Only several cities have proper sewer system. Sewer system is not available in Dedoplistskaro and Kvareli, and covers only 50% of cities in Lagodekhi and Akhmeta. Sewer system is very good in Telavi and Signagi. The problem is that sewage treatment plants are either outdated or non-existent. A large part of amount allocated from the state budget under the





rural development programme will be used for the improvement of water and sewer systems. Based on information provided by the municipalities, 39% of the amount allocated under the rural development programme was spent on the construction/restoration of water supply systems in 2012, and only 2% was spent on the construction/restoration of sewer systems. Nevertheless, no comprehensive solution to the water supply problems was found.

Percentage of households connected to the sewer system by the regions, 2010

| | |
|-------------------------------|-------------|
| Tbilisi | 97.6 |
| Adjara | 57.6 |
| Georgia | 46.0 |
| Kvemo Kartli | 31.2 |
| Shida Kartli | 29.9 |
| Imereti | 29.6 |
| Samtskhe-Javakheti | 25.9 |
| Mtskheta-Mtianeti | 20.6 |
| Samegrelo-Zemo Svaneti | 15.3 |
| Kakheti | 9.8 |
| Guria | 6.4 |

Source: World Bank, Georgia Urbanisation Review 2012

The gasification level of the region is 37,5%. Natural gas is supplied to most municipalities by the Kakheti regional office of Soccar Georgia Gas, and the Telavi municipality receives natural gas from Wissol Gas Distribution Company. The low-income population of the region cannot afford to pay for gas and uses firewood for heating.

The condition of main and internal roads in the Kakheti region has improved significantly over the past 5 years. As of 1 January 2013, 835 km. (31%) of (asphalt) paved roads and 889 km. (33%) of unpaved (dirt) roads are in need of rehabilitation. The rehabilitation of internal roads in the Kakheti region is mainly funded by the municipal government or municipal development fund.

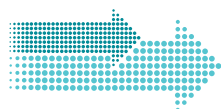
Maintenance of street lighting systems is funded by the local government. Based on data provided by the local municipalities, the street lighting issue in the Kakheti region has been resolved (except for the Dedoplistskaro municipality), for the most part. The cities and main roads of the municipalities are equipped with the properly functioning street lighting network.

Public transport in the region is represented by minibuses and cars transporting passengers within the municipality and to other municipalities.

According to the 2011 data, only 5.2% of the Kakheti population was connected to the Internet. In this regard, Kakheti is second last after Guria.

Waste is collected and managed in all municipalities by limited liability companies selected through a tender. The companies remove waste from cities and villages in accordance with the schedule established by the local self-government. According to information provided by the local self-government in September 2012, the cities of all municipalities have been provided with waste containers and waste bins.

All of Kakheti's eight municipalities have almost no infrastructure for the movement and development of people with disabilities. The same situation is in Georgia on the whole¹⁴. The standard of living is also dependent on the existence of cultural and sporting infrastructure.

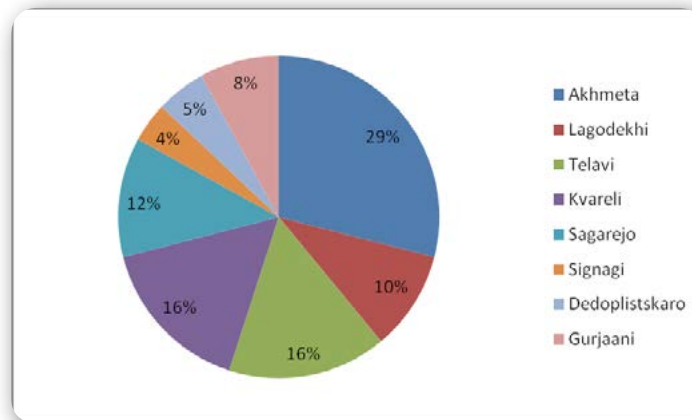


V. ENVIRONMENTAL PROTECTION

FOREST SECTOR AND BIODIVERSITY

Forests are one of the most important natural resources providing the population with firewood, construction materials, forest by-products and game-birds. According to the statistics, 11% of Georgia's forests are located in the Kakheti region which has the second-largest forest area. 98% of the region's forests are mountain forests having a very high ecological and economic significance. A large part of mountain forests has the following functions: anti-erosion, climate regulation, water-conservation, creation of natural gene-pool and other functions. It is also noteworthy that 80% of the region's mountain forests grow on high (more than 25°) and steep rock slopes and therefore, have a greater ecological significance. 2% of the region's forests are flood plain forests. 15% of Kakheti's forests have become protected areas thus making it possible to conserve and regenerate forests.

Share of Municipalities by forest areas



Source: Annual statistical brochure of Georgian Forestry - 2006

PROTECTED AREAS

A major part of Georgia's protected areas is located in the Kakheti region on 194 thousand hectares totalling 37% of the country's protected areas and 2.8% of the country's whole territory.

Protected areas demonstrate the best results compared to other areas of environmental management. Government funding and foreign investments in this area are increasing. In 2012, GEL 8.6 million was allocated for the development of protected areas, and GEL 5,6 million will be allocated in 2013. International donors helped to create tourist infrastructure, such as cottages and tourist routes, in the part of protected areas that have a great potential for tourism development.

AIR MANAGEMENT

"In 2012, 38,477 tons of hazardous substances were discharged from Georgian plants into the air, of which 568,3 tons (1.48%) were discharged in the Kakheti region;"

The major source of air pollution in Georgia, including Kakheti, is vehicle emissions. One of the air pollution sources in Kakheti is burning of leaves. There are no reliable data available with regard to this issue in Kakheti.

NATURAL DISASTER MANAGEMENT

Natural hazards have increased significantly in the whole world, as well as in Georgia, due to various factors ranging from climate changes to wrong agricultural practices. It is a serious problem in the Kakheti region. Losses from natural disasters are increasing every year. There is often drought in spring, rains at harvest time, hailing at any time of a year and stronger winds. A cycle of these climatic phenomena has changed dramatically posing a serious danger for agriculture and causing great losses to farmers. Losses caused by hail and strong wind on 19 July 2012 were unprecedented. In April and May 2013, hail in the Telavi and Gurjaani municipalities caused a huge loss to the agriculture.



We should also mention seasonal floods and droughts, or natural phenomena extended in time, such as waterlogging. Today, the whole Kakheti region faces various natural hazards.

ENVIRONMENTAL AWARENESS

Environmental awareness raising campaign is described in the document “Environmental Awareness for Sustainable Development, National Strategy and Action Plan of Georgia, 2012-2014” where formal, non-formal and unofficial activities are distinguished.

Percentage of various environmental activities funded by donors and government for the last three years (%)

| N | Activity | % |
|----|---|-----|
| 1 | Protected areas | 20 |
| 2 | Environmental infrastructure | 0 |
| 3 | Soil management | 4 |
| 4 | River management | 4 |
| 5 | Renewable and alternative sources of energy | 5 |
| 6 | Windbreaks and landscaping | 2 |
| 7 | Environmental awareness | 9 |
| 8 | Cross-border cooperation | 15 |
| 9 | Natural disasters | 13 |
| 10 | Human resources management | 5 |
| 11 | Forest sector and biodiversity | 7 |
| 12 | Climate change | 9 |
| 13 | Waste management | 5 |
| 14 | Financial stability | 2 |
| | Total | 100 |

Use of renewable and alternative energy

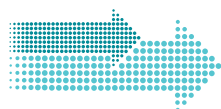
Use of alternative and renewable energy is of great importance to the Kakheti region as a source of cheap and efficient energy. High energy prices hamper the development of businesses and households. Besides, there are villages in the region where no electricity has been supplied to date. Under these conditions, it is important to develop and use alternative and renewable energy resources.

Compared to other regions of Georgia, Kakheti is not rich in alternative and renewable energy resources. Kakheti is located in a low wind speed zone. The region has only two areas suitable for the use of wind energy: The Alazani Valley where wind resources can be used effectively, and Iolto Zegani with a relatively limited potential. Due to the climatic conditions, Kakheti has a potential for the use of solar energy (270 sunny days per year). There is also a prospect for the production of bio-fuel by processing livestock manure.

However, hydro resources are still important. Based on these resources, it is planned to build 10 hydro-power plants. The construction of four hydro-power plants is going on.

Projects on hydro-power plants construction in the Kakheti region

| N | Hydro-power plant | Installed capacity | Average annual output |
|----|-------------------|--------------------|-----------------------|
| 1 | Stori-3 | 13.7 MW | 60,56 KW/h |
| 2 | Stori-1 | 14 MW | 69,37 KW/h |
| 3 | Chelti | 4.8 MW | 25,04 KW/h |
| 4 | Stori-2 | 11,4 MW | 50,52 KW/h |
| 5 | Chelti-2 | 4.8 MW | 25,09 KW/h |
| 6 | Stori | 11.8 MW | 56.78 KW/h |
| 7 | Duruji | 1,74 MW | 10,69 KW/h |
| 8 | Samkuristskali-1 | 4,88 MW | 25,70 KW/h |
| 9 | Avani | 4,6 MW | 18,70 KW/h |
| 10 | Samkuristskali-2 | 22,6 MW | 117,40 KW/h |
| | Total | 89,52 MW | 434,76 KW/h |





The ongoing construction of small and medium-sized hydro-power plants in the Kakheti region

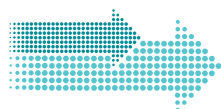
| N | Hydro-power plan | Installed capacity | Average annual output | Estimated investment (USD) | Stage |
|---|------------------|--------------------|-----------------------|----------------------------|--------------------|
| 1 | Shilda | 5 MW | 30 KW/h | 5,500,000 | under construction |
| 2 | Stori-2 | 11,4 MW | 50,52 KW/h | | Ongoing research |
| 3 | Stori-3 | 13,7 MW | 60,56 KW/h | | Ongoing research |
| 4 | | | | | Ongoing research |
| 5 | Stori-1 | 14 MW | 69,37 KW/h | | Ongoing research |





VI. FACTOR ANALYSIS OF THE REGION (SWOT)

| | |
|---|---|
| <p>STRENGTHS LARGE AREA OF AGRICULTURAL LAND</p> <ul style="list-style-type: none">• Wine and alcoholic drinks are the country's export production• Potential for the development of agricultural processing industry• Potential for the development of recreational, eco-tourism, adventure tourism and spa resorts• Good condition of main roads• Electrification of the region• Good geographical location (proximity to Tbilisi and border with Azerbaijan)• Good condition of take-off runway in the Telavi airport• Abundance of forests and protected areas | <p>WEAKNESSES AGEING OF POPULATION</p> <ul style="list-style-type: none">• Migration of young people• High spending of the government on pensions and benefits• High level of self-employment• Poor condition of irrigation system• Sewer system unavailable to 90% of the population• Natural gas unavailable to 62.5% of the population• Poor condition of internal roads (31% paved and 33% unpaved roads)• Frequency of natural disasters• High incidence rate of cancer, thyroid disorders and anaemia. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none">• Opportunity to modernise agricultural industry• Promote the development of agricultural industry to increase an export potential and to meet the local market demands• Develop various tourism areas• Increase population's incomes by creating jobs in these two industries• Launch new industrial sectors based on local resources and create jobs• Reduce the level of self-employment and increase the employment rate• Increase the employment rate by improving the quality of education in the region and creating jobs which in turn will slow down the migration• Encourage people to stay in the region by providing employment opportunities and developing social infrastructure facilities (child care centres, schools, informal education centres).• Increase the standard of living by improving the infrastructure, ecological condition and preventing certain diseases.• Reduce material and human losses caused by natural disasters by undertaking awareness-raising campaigns and preventive measures. | <p>THREATS</p> <ul style="list-style-type: none">• Natural disasters• Pollution of air by emissions• Natural decrease and illness of population. |





SOCIAL DEVELOPMENT OF THE REGION

| | |
|--|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • High level of basic education • Suitable geographical location of Kakheti's settlements (proximity to main roads); • Natural and climatic conditions favourable for the development of agricultural and tourism industry. | <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Promote economy and agriculture • Create jobs • Implement a youth policy • Promote birth and create social infrastructure • Reverse the trend of youth migration and ageing • Adapt education to the needs of the labour market • Provide additional services to families with children as part of local programmes |
| <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Either outdated or unavailable infrastructure for youth development • Migration from the region, lack of jobs • Ageing of population • Slow rate of economic development • Lack of qualified human resources in the region • Non-existence of social security programmes for children and mothers • Low percentage of children involved in social security programmes | <p>THREATS</p> <ul style="list-style-type: none"> • Continuing trend of migration and ageing • No development of infrastructure • Economic crisis or stagnation in the country • Deterioration of investment climate in the country • No attention paid to the implementation of reasonable youth programmes and no investments in the development of children |

HEALTHCARE

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Availability of outpatient and emergency medical services under the comprehensive healthcare programme • Well-trained and retrained primary care doctors and medical assistants • Upgraded infrastructure in the hospital sector • | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Obsolete and outdated infrastructure and equipment in most primary care clinics of the region • Lack of medical specialists in the hospital sector for which reason the population has to seek medical assistance in Tbilisi • Low efficiency of public healthcare • No research undertaken either in the region or in the municipalities to study the outbreak of diseases. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Study the outbreak of diseases in the municipalities • Advocate a healthy way of life through awareness campaigns • Monitor the efficiency of public healthcare • Lobby for improvement of working conditions for doctors, • encourage medical specialists to work in Kakheti • Establish a regional association of doctors to protect and lobby the interests of doctors • Establish an association of patients to protect the rights and interests of patients. | <p>THREATS</p> <ul style="list-style-type: none"> • • No consideration given to the public healthcare problems in municipal budget plans • Reluctance of local governance to resolve healthcare issues within its competence • Social apathy of the population and doctors • No public policy to attract and encourage highly specialised doctors to work in inpatient facilities of the region • Low remuneration of medical staff and late payment of salaries. |



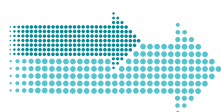


EDUCATION

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Existence of all levels of educational institutions in Kakheti • Two vocations institutions compliant with the standards • A high proportion of the region’s population having vocational and degree-level qualifications | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Vocational and degree-level qualifications incompatible with the demands of the Kakheti labour market • Poor condition of child care facilities • Low access to the Internet in regional schools • Unavailability and disrepair of informal education facilities which are required for the harmonious development of children and youth • Limited opportunities of inclusive education • Low access to day care centres for children with disabilities. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Adapt higher and vocational education to the needs of the labour market • Put vocational institutions in contact with employers and ensure cooperation based on the demand and supply of required human resources • Complete restoration of infrastructure for general schools and pre-school institutions to improve the quality of education • Offer inclusive study programmes in schools and child care centres • Restore informal education infrastructure • Promote intellectual and physical development and a healthy way of life among young people | <p>THREATS</p> <ul style="list-style-type: none"> • Lack of resources in municipalities for free and efficient pre-school education • Local government’s disregard of the importance of informal and inclusive education for children and youth • Low level of social activity |

PRODUCTION

| | |
|--|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Availability of raw materials for the construction sector • | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • A lack or absence of skilled human resources • Unavailability and high cost of financial resources • Unavailability of consulting services |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Develop enterprises focused on local resources (except for the agriculture) and equipped with the latest technology and modern principles of management. | <p>THREATS</p> <ul style="list-style-type: none"> • High price of energy • High interest rates on loans • Lack of demand (e.g. suspension of construction). |





TOURISM

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • The region’s cultural heritage • Natural and geographical conditions • Hospitality traditions of the regional population and willingness to develop this sector. | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Low quality of travel services • Infrastructure failures (e.g., interruption of water supply) • Lack of skilled and experienced human resources in the sector |
| <ul style="list-style-type: none"> • Opportunities • Develop recreational tourism • Develop adventure tourism • Develop agricultural tourism • Re-open spa resorts • | <p>THREATS</p> <ul style="list-style-type: none"> • Political unrest in the country • Deterioration of investment climate |

INVESTMENTS

| | |
|---|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Increasing demand for agricultural production in the domestic market and the export potential • Cheap labour force • Simple procedures for starting a business • Free repatriation of capital from the country | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Seasonal risks of the agricultural industry and long-term return on capital • Problems associated with the management of internal roads, water, sewer systems and solid wastes. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Attract investments to the agricultural processing industry • Restore the irrigation system • Investments in various types of tourism • Investments in the production of building materials • Investments in bio-fuel | <p>THREATS</p> <ul style="list-style-type: none"> • Deterioration of investment climate in the country • Lower number of sales markets |





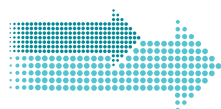
AGRICULTURE

AGRICULTURAL LANDS

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Large and fertile areas of various types of soil | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • No enrichment of soil with a sufficient amount of mineral and organic fertilisers, the ongoing process of desertification, especially in Sagarejo and Dedoplistskaro. • A large part of agricultural lands is affected by soil erosion caused by wind and water. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Make inventory of agricultural lands and create a comprehensive database of landowners • Increase the fertility of agricultural lands • Create a comprehensive legal framework for soil protection | <p>THREATS</p> <ul style="list-style-type: none"> • Inundation of arable and pasture lands • Spread of pests (especially the <i>Melolontha aceris</i>) in the soil of Kakheti. • Flood and stream water. |

WINE-MAKING

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Mix of various grape varieties • Fertile soil • Agricultural and climatic conditions • Unique wine-making techniques | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Lack of modern grape nurseries / with the exception of Telavi where the grape nursery Arivie-Georgia was constructed in the Kondoli village with the support of Georgian and French investors, including nurseries of some large farmers which, however, do not have a full production cycle. • Lack of stool beds for seedlings and grape varieties • No testing of young plants in laboratories • Low-yielding and widely spaced vineyards • No state regulations of losses in wineries • No promotion of wines produced in family-run wine cellars • Low qualification of vine-growers and wine-makers • Falsification and high price of pesticides • High price of fertilisers and fuel • Unsuccessful subsidies in grapes intended for sale to wineries |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Construct modern grape nurseries and ensure availability of high-quality and certified seedlings • Install modern technological equipment in family-run and small-sized wine-cellars • Encourage the sale of wines produced in the region in the local and international markets • Develop state standards for wine production losses • Make laboratory services available to producers • Implement professional development programmes. | <p>THREATS</p> <ul style="list-style-type: none"> • Spread of pests (<i>Melolontha aceris</i>) in the soil. • Deterioration of investment climate • Loss of export markets |





PRODUCTION OF CEREALS

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • A diversity of unique wheat varieties • Fertile soil, favourable agricultural and climatic conditions | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Lack of qualified human resources • Low standard seeds • Low per-hectare yield • New varieties subject to zoning • High cost of production • Low quality of oil in oil extraction plants |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Set up seed nurseries and seed testing farms equipped with modern technology • Produce high-quality seeds • Establish pilot plots • Raise investments to built mills, oil extraction plants, distilleries and fodder producing plants • | <p>THREATS</p> <ul style="list-style-type: none"> • Natural disasters Hail, wind and drought • Planting of untested varieties • Massive spread of locusts and other dangerous pests |

VEGETABLES AND MELONS

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Fertile soil, favourable agricultural and climatic environment | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Lack of storage spaces • Remote location of cold storage facilities for perishable products and lack of such facilities in the municipalities • Lack of canning plants • Lack of qualified agronomists • No opportunities for introduction of modern technology |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Opportunity to build greenhouses in the region, in particular, in the municipalities located near the capital city, Sagarejo and Telavi. • Expand resource base • Build canning plants • Raise investments to build storage and refrigeration facilities for vegetables and melons • Replace imported peanuts with local production gradually, by using high-yielding and standard varieties | <p>THREATS</p> <ul style="list-style-type: none"> • Drought, flood, hail and hurricane • Massive spread of pests |



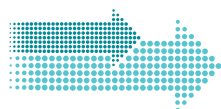


POTATO GROWING

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Fertile soil • Favourable agricultural and climatic conditions • High potential for bio-production | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Agricultural lands are not irrigated • Unavailability of modern agricultural equipment, use of manual labour by farmers • Lack of qualified agronomists in the region • Unavailability of high-quality seeds |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Produce bio-potatoes in the mountainous regions of Kakheti. • Introduce modern agricultural technology • Build storage and other support infrastructure and bring modern agricultural equipment to the region | <p>THREATS</p> <ul style="list-style-type: none"> • Natural disasters Hail, hurricane, severe frosts • |

FRUITS

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Fertile soil, favourable agricultural and climatic conditions, a wide variety of fruit trees • Favourable agricultural and climatic conditions for growing bio-fruit | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Low-yield orchards • Difficulties with selling peaches at the time of ripening, or low selling price • Unavailability of agricultural crop insurance • Lack of refrigeration facilities and high price of service • Lack of canning plants • Lack of qualified agronomists |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Establish modern seed orchards • Plant certified fruit-tree saplings • Build underground refrigeration facilities and store fruit with low energy costs • Build modern canning factories • Produce fruit juices, jams and preserves • Find and develop local and export markets | <p>THREATS</p> <ul style="list-style-type: none"> • Hail, hurricane, frosts • Spread of soil pests |





LIVESTOCK

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Agricultural and climatic conditions • Large areas of grasslands and pastures | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Low level of nutrients in pastures • Low productivity of livestock • Very bad epizootic condition • Higher incidence of very dangerous diseases in animals • Poor condition of livestock driveways • No system for inventory and certification of livestock • Undeveloped private veterinary sector • Weakness of legal framework • Non-operating veterinary stations in villages • Lack of qualified specialists in this field • Lack of seed nurseries • Sharp deterioration of epizootic condition, sheep diseases, in particular, malanders. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Plant animal fodder in a large area of pasture lands • Breed high yield cattle by alternating the use of pastures, construction of modern breeding farms • Open artificial insemination centres • Open slaughter-houses • Establish a private veterinary system • Establish modern milk and dairy plants | <p>THREATS</p> <ul style="list-style-type: none"> • Outbreak of very dangerous animal diseases (malanders, brucellosis and, in some cases, anthrax). |

POULTRY BREEDING

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Favourable agricultural and climatic conditions for breeding of poultry in the region, such as chickens, quails, pheasants, turkeys, ducks, geese and other species. | <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Equip poultry plants with modern technology • Select and breed high yield poultry • Improve the local fodder producing centre • Develop meat and poultry production, substitute imports |
| <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Lack of local fodder-producing centres • High cost of modern technology • Species of low-yielding poultry • Lack of qualified human resources | <p>THREATS</p> <ul style="list-style-type: none"> • Outbreak of avian influenza |



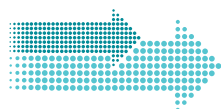


BEE-KEEPING

| | |
|---|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • A wide diversity of forest and meadow plants in Kakheti • A long period of blooming • Unique features of flowers and high content of various organic substances | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • High price of support equipment and materials • Lack and obsolescence of bee colonies/bee-hives/hand-held containers • No knowledge of modern technology and high cost of introducing such technology • No export of honey • Deficiency of legal framework regulating the sector |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Export honey to Europe and USA | <p>THREATS</p> <ul style="list-style-type: none"> • Drought, hail, hurricane and frost • Outbreak of bee diseases |

AGRICULTURAL EQUIPMENT

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Existence of modern agricultural equipment for cultivation of certain agricultural lands in Kakheti • The government's willingness to bring new equipment to the country | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Outdated fleet of tractors, outdated agricultural machineries • Losses at sowing and harvesting time • High cost associated with the maintenance of old equipment • Expensive fuel, poor quality and high price of spare parts, poor quality of tillage by agricultural machineries • Lack of skilled machine operators |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Introduce new agricultural equipment depending on the sub-sector profiles of the region • Retrain groups of machine operators and introduce new technology | <p>THREATS</p> <ul style="list-style-type: none"> • Suspension or delay of government programmes |





MELIORATION SYSTEM

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Affluent rivers and the relief of Kakheti are factors favourable for Kakheti’s melioration system • | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Main channels and internal irrigation networks in a whole number of areas are either damaged or inoperative, • Main channels and irrigation water are polluted by household waste • Mechanical irrigation systems in Sagarejo and Dedoplistskaro are out of operation, the internal irrigation network linked to the systems is out of order; management of the systems is inefficient • Lack of skilled human resources |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • In addition to the rehabilitation of gravity irrigation system, there is an opportunity to restore mechanical irrigation systems and irrigate agricultural lands in Kakheti • Install modern internal irrigation systems, encourage farmers to participate in the management of internal irrigation systems, create effective models of internal irrigation systems which will make it possible to meter the consumption of water and collect water consumption fees. | <p>THREATS</p> <ul style="list-style-type: none"> • Natural disaster, in particular, drought • Discharge of household wastes by the population into the river and pollution of irrigation water. |

INFRASTRUCTURE

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • High level of electrification • Good condition of main roads | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Interruption of water supply to the population • Lack of land use plans • No gasification in a majority of villages in Kakheti • Disrepair of internal roads • Only 35% of Dedoplistskaro city and main roads of large villages are equipped with street lighting systems • Power voltage is often low both in villages and cities • Obsolete public transport (vehicles) • A low number of population connected to the Internet network • No public waste bins in cities and villages. |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Gasification of the whole region • Use of alternative energy sources • Uninterrupted and efficient water supply • Rehabilitate internal roads • Manage waste disposal sites • Create infrastructure for people with disabilities • Develop internal roads • Develop water supply system • Ensure Internet coverage in the whole region | <p>THREATS</p> <ul style="list-style-type: none"> • Damage to infrastructure by natural disasters |





ENVIRONMENTAL PROTECTION

FOREST SECTOR AND BIODIVERSITY

| | |
|--|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Self-healing trees • Large stocks of non-timber resources • | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • No biodiversity strategy and action plan for the Kakheti region • Uncontrollable deforestation • No inventory of forests • No phytopathological and phytosanitary measures undertaken for 20 years • No red list • Inefficient state control over the hunting area • A large part of flood plain forests destroyed, illegal harvesting of natural resources • • No phytopathological studies • Lack of nursery orchards |
| <p>2.3 OPPORTUNITIES</p> <ul style="list-style-type: none"> • Develop recreational and spa tourism by using the potential of forests • Control and penalties on illegal logging of forest | <p>2.4 THREATS</p> <ul style="list-style-type: none"> • Disregard of the existing problems and challenges |

PROTECTED AREAS

| | |
|--|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Wealth of protected areas • Good and effective legislation with regard to biodiversity and ecosystem • Efficient system for the protection of protected areas • Increasing interest of Georgian citizens towards protected areas • Professionalism of people working in this area | <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Develop protected areas • Opportunity to create cross-border protected areas with Azerbaijan • |
| <p>WEAKNESSES</p> <ul style="list-style-type: none"> • No plans for management of certain protected areas • Underestimation of a tourism potential of certain protected areas • Lack of cooperation between the State University of Telavi and protected areas administrations • Lack of government funding • Indistinct internal and external zoning of protected areas • Lack of available electronic resources • Lack of scientific research • No public monitoring system | <p>THREATS</p> <ul style="list-style-type: none"> • Possible changes in the priorities of environmental protection and protected areas development • along with the change of the government |





AIR MANAGEMENT

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Lack of industrial enterprises in the region • Growing interest of the government towards air management issues | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Air pollution due to the seasonal burning of leaves • No filters in operating enterprises • No laboratories checking the air quality • Illegal waste dumps totally inconsistent with modern standards • Air pollution by vehicle emissions - a large number of faulty vehicles. |
| <ul style="list-style-type: none"> • Opportunities • Growing interest of international and national associations towards air management • Implement vehicle inspection system. | <ul style="list-style-type: none"> • Threats • Disregard of air management issues • Increasing risk of air pollution by vehicles and enterprises |

NATURAL DISASTERS MANAGEMENT

| | |
|--|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Documentary base and emergency management agencies established in the municipalities for the purpose of disaster response • Plans of emergency response to natural and man-made disasters developed and approved by the local council in the eight municipalities • Rescue services at the regional and municipal level • Growing interest of the government and civil society towards reducing natural hazards | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • Development of effective models to register and count losses from natural disasters and to compensate affected farmers • No assessment of natural hazards in the municipalities • Current plans do not meet the existing requirements and do not provide for the introduction of new technology • Lack of qualified staff and technical resources • No early warning system • Lack of communication between the emergency management agency and the population • Low level of public awareness • Lack of financial resources |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Study international practices of reducing, preventing and managing natural hazards • Opportunity to apply innovative approaches | <p>THREATS</p> <ul style="list-style-type: none"> • No coast-protecting system on rivers and in ravines • Increasing frequency and magnitude of natural disasters |



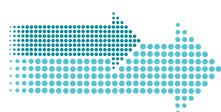


ENVIRONMENTAL AWARENESS

| | |
|--|---|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Availability of general action plan • Active role of the non-government sector • Existence of ecological clubs in a large part of public schools • Existence of natural science specialisations in the Telavi University • Information on environmental protection and the department of environmental awareness available in the Ministry of Environment and Natural Resources of Georgia | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • The national strategy contains general recommendations without taking into account regional or local specifics • Environmental awareness is not a priority • Lack of environmental awareness projects in the Kakheti region • Lack of mandatory environmental subjects in the curricula of school and universities • Lack of specialists in the region |
| <ul style="list-style-type: none"> • Opportunities • Growing interest of the state and local self-government towards the environmental awareness | <ul style="list-style-type: none"> • Threats • A growing number of environmental problems and disproportion of environmental education |

USE OF RENEWABLE AND ALTERNATIVE ENERGY

| | |
|---|--|
| <p>STRENGTHS</p> <ul style="list-style-type: none"> • Local population's interest in using alternative energy sources • The government's interest in developing and using the potential of alternative energy • The government's priority is the development of renewable (water resources) energy resources • Small hydro-power stations have already been designed and are currently under construction in the Kakheti region. | <p>WEAKNESSES</p> <ul style="list-style-type: none"> • No legislative framework • No assessment of potential wind and solar energy sources has been done in Kakheti • No single system for assessing the environmental impact of renewable and alternative energy • No proper assessment of environmental risks |
| <p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Abundance of water resources • Opportunity to construct new small-sized hydro-power plants • Opportunity to produce bio-fuel in the region • Install energy-saving light bulbs using alternative energy sources in the municipalities | <p>THREATS</p> <ul style="list-style-type: none"> • A decline and instability of water resources under the conditions of global environmental disasters. • |





VII. PRIORITIES, VISION, STRATEGIC GOALS, OBJECTIVES AND EXPECTED OUTCOMES OF THE REGION'S DEVELOPMENT

REGIONAL DEVELOPMENT PRIORITIES

- Social and economic development of the region
- Improvement of the population's standard of living
- Improvement of the demographic condition

THE EIGHT-YEAR REGIONAL DEVELOPMENT VISION

By the end of 2012, migration from Kakheti should reduce followed by a natural increase of the population. The self-employment rate should reduce followed by an increase of employment in the agricultural and tourism industry. Investments should be attracted and government support should be provided for the agricultural, tourism and other industries where local raw materials contribute to the development of the industries. Farms and households, storage and refrigerating facilities and canning factories should develop. New technology should be introduced and agricultural equipment should be available to farmers. Irrigation systems should be restored and harvest should increase. Domestic agricultural production in the region should replace imports. Domestic production should be sold both inside and outside Georgia. Qualified staff should work in the sector, professional associations should be established.

Reconstruction of internal roads should continue. Supply of water to cities and villages should improve; sewer system should be available to more households; waste dumps should be constructed; the Internet should become available to the region's self-government structures, educational institutions, offices and families thus contributing to the exchange of information, improvement of education and business relations. Infrastructure for people with disabilities should be constructed. The population should use alternative sources of energy and the amount of utility payments should accordingly decrease.

The biodiversity of Kakheti should be preserved, protected areas should be managed in a better way, modern air management technology should be introduced. Natural disaster management and prevention system should improve.

Rehabilitation and provision of modern equipment for child care centres and public schools in Kakheti should continue. It should be easier to find a job with the knowledge and qualification received in the Telavi State University and vocational institutions of the region. Informal education and recreational facilities should be opened.

Rehabilitation of out-patient clinics should continue, qualified medical specialists should work in hospitals. The number of new diseases should reduce, a healthy way of life should be encouraged, and birth rate should increase.

The self-government, central government, NGO and business sectors in the region will cooperate more closely. The population should be actively involved in the public and economic life. The region should become attractive for investors and tourists. The standard of living in Kakheti will improve.





STRATEGIC GOALS, OBJECTIVES AND EXPECTED OUTCOMES IN 2014-2021

Agriculture

Goal 1. Improve the quality of all kinds of agricultural lands

Objective 1.1. Improve the quality and make an inventory of all kinds of agricultural lands

Inventory of agricultural lands, including vineyards, should be made and a database of land owners should be created.

Objective 1.2. Prevent flooding of agricultural lands

Whenever necessary, coast protection should be carried out.

Objective 1.3. Prevent crop damage

Anti-locust measures should be implemented.

Goal 2. Increase the potential for wine exports by improving the quality and legislative framework

Objective 2.1 Improve the quality of grapes

Grape nurseries and seed-testing laboratories

Objective 2.2 Improvement of legislative framework

Wine loss standards should be developed at a central level, and Georgian legislation should be harmonised with the relevant international regulatory acts.

Objective 2.3 Supply qualified specialists for the industry

Training and retraining courses for vine-growers/farmers and wine-makers should be provided by vocational institutions and the Telavi State University.

Purpose 3. Develop wine-making through the support of the central and local governments and by encouraging SMEs

Objective 3.1 Increase the production share of SMEs

The feasibility of investments in wine producing SMEs should be explored. Festivals and exhibitions of home-made wines should be held for marketing purposes.

Goal 4. Increase the volume and quality of cereals

Objective 4.1 Distribute varieties by zones and produce high-quality seeds

Seed testing farms and seed nurseries should be established. Existing nurseries should be restored. All of these measures should help to ensure better quality of seeds.

Objective 4.2 Increase the quality of local production

Investments in modern technology Modern storage facilities, drying and packaging plants, and quality control laboratory should be established. All of these measures should help to ensure better quality of the production.

Objective 4.3 Increase corn production

Corn varieties should be distributed by zones in the region and high-quality seeds should be grown thus contributing to the increase of corn production.

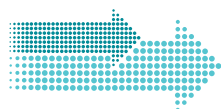
Goal 5. Improve the processing of vegetables and melons

Objective 5.1 Promote the production of canned vegetables and melons

Modern agricultural and technical methods should be applied to produce vegetables and melons, investments should be made in canning, refrigerating and storage facilities thus promoting the production of canned vegetables and melons.

Objective 5.2 Increase peanut production

Peanut production should grow, marketing campaign should be held to develop the local market. As a result, peanut production should increase.





Goal 6. Growing of bio-potatoes

Objective 6.1 Grow bio-potatoes in the mountainous regions

Soil analyses should be conducted and storage facilities should be established.

Goal 7. Promote further development of fruit production by growing peaches and pumpkins and establishing storage facilities and processing plants

Objective 7.1 Growing of peaches and pumpkins

Modern peach nurseries and nursery orchards should be established. Frost-proof seed nurseries should be established and, as a result, the production of peaches and pumpkins should increase.

Objective 7.2 Storage and processing of fruit

Fruit storage facilities and modern canning plant should be built, and fruit storage and preservation should be started.

Goal 8. Bee-keeping. Increase honey production and recognise its export potential

Objective 8.1 Support farmers in the production of honey and bee products

The production of honey and bee products should be encouraged by purchasing support equipment and materials for bee-keeping, supplying hand-held beehive containers and introducing up-to-date technology

Objective 8.2 Recognise the export potential of honey

Kakheti-produced honey should be recognised as an export product by means of joining international organizations and creating legislative framework at the central level.

Goal 9. Livestock: Improve the quality and production

Objective 9.1 Prevent animal diseases

Inventory and certification of livestock was conducted in the region. Timely vaccination against very dangerous animal diseases such as malanders, brucellosis and anthrax., should be performed to prevent the incidence of the diseases and reduce the risk of their outbreak.

Objective 9.2. Increase the efficiency of veterinary system

Effective mechanisms for controlling the quality of vaccination should be developed and applied at the central level; legislative framework regulating the private veterinary sector should be established. These measures should promote the efficient functioning of the system.

Objective 9.3 Development of milk and meat production

Breeding farms and artificial insemination centres should be opened, modern farms should be built, investments should be raised to establish modern milk, dairy and meat producing plants.

Goal 10. Poultry breeding Encourage the development of family-run and small-sized farms, replace imports in the domestic market

Objective 10.1 Production of high-quality meat and eggs

Varieties of high-yielding poultry should be bred, the development of family-run and small-sized farms should be encouraged thus increasing the scale and competitiveness of high-quality production.

Objective 10.2 Substitution of imports in the domestic market

The Telavi poultry plant should be launched into operation with the support of the private sector, the plant should be provided with modern technology and qualified staff; eggs and meat produced by the plant and small farms should also be distributed and sold in other regions of Georgia.

Goal 11. Ensure geographical accessibility and availability of various types of agricultural equipment

Objective 11.1 Easy geographical access to service centres

Service centres should be opened in geographically accessible locations.

Objective 11.2 Availability of all types of equipment





Provide the region with vine and fruit seeding machines, underground lifters, fertiliser spreaders and harvesters. As a result, all types of equipment should be available to the population of the region.

Objective 11.3 Conformity of machine operator's qualifications to the latest standards - professional development courses for machine operators in the region's vocational institutions to ensure that their qualification is up to the latest standards

Goal 12. Amelioration Restore internal irrigation networks and provide modern technology, restore pumping stations and internal irrigation networks

Objective 12.1 Restore irrigation systems.

Irrigation systems, headwater structures, main channels, hydraulic structures and internal irrigation networks should be restored and equipped with modern technology.

Economy (excluding agriculture)

Goal 13. Develop the non-agricultural potential by studying the resource base and providing incentives for entrepreneurs

Objective 13.1 Study of resource base

The region's resource base should be studied and opportunities for establishing new enterprises should be explored based on the selected criteria.

Objective 13.2 Encouragement of entrepreneurs

Consulting centres should be established where business representatives should be provided with expert advice on tax issues, fund-raising and financial management. As a result, the existing resources and business potential should be studied and entrepreneurs should be provided with the required information.

Goal 14. Promote tourism by adding new destinations, developing infrastructure and improving qualifications

Objective 14.1 Development of tourism potential

The development of the region's tourism potential should foster recreational, adventure, eco and agro tourism. Spa resorts should be developed in the Gurjaani (Akhtala) and Sagarejo (Ujarma) municipalities. Tourist bases should be opened, with hiking tourism in summer and ski tourism in winter (the Tsivi mountain) in the Telavi municipality.

Objective 14.2. Tourism promotion through infrastructure projects

Water supply should improve, waste dump problem should be resolved (sanitation-and-epidemiological condition should improve and the problem of stray animals should be addressed), roads should be constructed thus making the region more competitive and attractive for tourists.

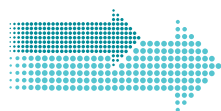
Objective 14.3. Staff qualification improvement

Educational institutions of the region should organise courses and trainings on travel business where interested persons can acquire skills and knowledge of how to start and manage travel business. Professional travel association should be established in the region with the goal of lobbying the industry interests, establishing business contacts, improving services, raising funds and ensuring greater involvement of people engaged in the industry.

Goal 15. Develop the region by raising investments

Objective 15.1 Investments in the agricultural processing industry

The investment needs of the region should be explored and, where feasible, investments should be made in seed testing and producing farms (seed testing farms of Tsnori, Gurjanni and Telavi), pilot farms, nursery gardens, modern storage houses, packaging plants, drying and cooling facilities, canning, cooling and storage facilities, greenhouses, peanut production, modern canning plants, small and mid-sized honey producing plants, modern milk and meat producing plants, and poultry plant. In addition, where feasible, investments should be made in gravity irrigation systems of upper and lower Alazani and in headwater





structures, in the construction and rehabilitation of main channels and hydraulic facilities, in mechanical irrigation systems, pumping stations and internal irrigation systems. As a result, the industry should be modernised, the production rate and competitiveness should increase.

Objective 15.2 Investment in tourism

Where feasible, investments should be made in tourist bases, recreational tourism, eco tourism, spa resort (in Gurjaani (Akhtala) and Sagarejo (Ujarma) thus contributing to the development of Kakheti's tourism potential.

Objective 15.3 Investments in alternative energy

The feasibility of investments in bio-fuel should be studied and investment projects should be implemented. Alternative sources of energy should be used and developed, and electricity should become more available to the population and regional economy.

Infrastructure

Goal 16. Supply high quality water to the population and connect households to the sewer network

Objective 16.1 Drinking water supply

The rehabilitation of outdated networks should be supported; the headwater channel system should be renovated making it possible to improve supply of water to the population.

Objective 16.2 Supply of drinking water to rural areas of the region

Outdated water networks should be replaced and rehabilitation of drainage systems should continue. As a result, supply of water to rural areas should improve.

Objective 16.3 Drinking water loss prevention

Installation of water meters should continue. Penalties should be imposed on wasteful use of water. As a result, water losses should reduce.

Objective 16.4 Continue construction of sewer network

Installation of sewer networks should continue and the existing sewer networks should be rehabilitated.

Objective 16.5. Water quality control

Water treatment plants should be constructed and restored.

Goal 17. Increase the efficiency of water supply and waste management

Objective 17.1 Reduce subsidies for water supply and waste disposal services in rural areas, and increase self-funding

Fees should be introduced on water supply and waste disposal in rural areas. Billing and collection system should be implemented and administered.

Objective 17.2 Efficient use of financial resources

Funds released from the local self-government should be reinvested in the improvement of water supply and waste disposal services in rural areas thus ensuring efficient use of financial resources.

Goal 18. Supply of natural gas to the population

Objective 18.1 Expansion of gas network in the region

Connection of villages to the central gas network should continue, and gas meters should be installed . As a result, natural gas should become available to a major part of the region's population.

Goal 19. Rehabilitation of internal roads and drainage channels

Objective 19.1 Continue rehabilitation of problem areas

Rehabilitation of streets and drainage networks in cities, and rehabilitation of main rural roads and drainage systems in villages should continue.





Goal 20. Improve street lighting in the region

Objective 20.1 Street lighting improvement

Where appropriate, street lighting in settlements should be improved.

Goal 21. Provide Internet coverage to people in the region

Objective 21.1 Extend Internet coverage to all municipalities of the region

Introduce/install appropriate communication systems and facilities to provide Internet coverage to all municipalities. Public institutions and educational establishments should be connected to the Internet. Internet cable should be laid in settlements. thus making the Internet more available to the population. This should help to improve the level of education, trade and economic relations in the region.

Environmental protection

Goal 22. Liquidate illegal waste dumps and manage waste in an organised way

Objective 22.1 Construction of waste disposal sites

The region should have a sufficient number of waste disposal sites. As a result, the ecological condition, the physical appearance of region and the standard of living should improve.

Goal 23. Spatial planning for the future development of the region

Objective 23.1. Spatial planning

Spatial/land use plans should be developed and implemented in the region.

Goal 24. Preserve forests and biodiversity by means of inventory and protection of biodiversity

Objective 24.1 Inventory of forests

Strategic zoning and inventory of forests should be performed, including identification of pastures and non-forest areas.

Objective 24.2 Protection of biodiversity

A database of threatened species of plants and animals should be created. A strategy for the protection of Kakheti's biodiversity and a red list should be developed. Conservation of flood plain forests (using a single approach) and phytopathological research should be performed. Seed farms should be established in the region thus contributing to the protection of the region's biodiversity.

Goal 25. Improve the efficiency of protected areas management and increase their potential for tourism

Objective 25.1 Improve management of protected areas

Plans for management of protected areas in Batsara-Babanauri, Mariamjvari, Lagodekhi and Vashlovani, Ivri and Chachuna should be developed at the central level.

Objective 25.2. Assessment of tourism potential

Assessment of tourism potential for all protected areas of the Kakheti region should be performed at the central level.

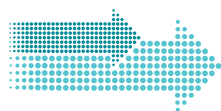
Objective 25.3 Professional development opportunities

Professional development opportunities in the region should be provided through training courses, hands on training and exchange programmes.

Goal 26. Improve the efficiency of air management by monitoring and preventing pollution.

Objective 26.1. Monitoring of air quality

Enterprises discharging hazardous substances into the air should be registered, and a database should be created. Air quality should be monitored in the region which means that an observation station should be launched into operation in the Kakheti region and the number of surface water quality monitoring stations should increase.





Objective 26.2 Prevention of emissions from burning of leaves

Campaigns to raise public awareness about the negative impacts of burning leaves should be held in all municipalities. Penalties (fines) on air pollution should be introduced.

Goal 27. Increase the efficiency of natural disaster management and prevention

Objective 27.1. Disaster prevention and readiness for adequate emergency response

Environmental risks should be assessed and action plans should be developed in the region. Early warning system should be implemented to prevent seasonal disasters. The existing emergency plans for natural and man-made emergencies should be improved. Authorised working groups should be established in the local self-government of all municipalities to register losses from natural disasters with the involvement of representatives from research institutions and active citizens. Anti-hail, anti-drought and modern wind-protective technology should be implemented in farms with the government support. Responsible public officials should complete training and continuing education courses. Risk assessment documents, risk maps and constantly updated database should be created. The infrastructure for reducing natural disasters should be improved (drainage systems, coast-protection, landscaping). As a result, the region should have a system for preparedness and emergency response.

Goal 28. Improve environmental management by raising environment awareness

Objective 28.1 Include environmental education in the school curricula of the region

Schools should be equipped with the necessary equipment for study of natural science. Environmental education should become a mandatory component of extra-curricular studies at school.

Objective 28.2 Study of natural science in the Telavi University

The Telavi State University should offer the following specialisations relevant for the Kakheti region: climatology, forestry, ecology, geology

Goal 29. Use renewable and alternative energy

Objective 29.1 Introduction of legal framework

The objective involves the introduction of regulatory acts at the central level to regulate the generation and use of alternative and renewable energy sources.

Objective 29.2 Use of alternative and renewable energy

Energy-saving light bulbs and other bulbs using alternative or renewable energy sources should be installed during the urban planning and landscaping of the region. Opportunities for generation and use of solar energy should be assessed and applied in practice. The opportunities of rural areas of Tusheti and river Iolta should be explored and support for the use of alternative energy sources in such areas should be provided. Support for biofuel production should be provided and pilot projects should be implemented.

Healthcare

Goal 30. Increase the standard of living by improving municipal healthcare programmes

Objective 30.1 Development of programmes based on municipal needs

Reasons for prevalence and incidence of diseases should be studied. Causes of tuberculosis should be studied and prevented in the relevant municipalities. Causes of rabies should be studied and preventive measures should be undertaken. All needs and actions to be taken should be identified and assessed. Healthy life style programmes should also be adequately reassessed.

Goal 31. Rehabilitation of outpatient clinics

Objective 31.1 Rehabilitation of primary care facilities

Actions required for the rehabilitation of primary care facilities in the region should be identified and assessed. Rehabilitation of outpatient clinics should continue.





Goal 32. Improve contractual mechanisms and supply medical specialists to increase the efficiency of hospital sector

Objective 32.1. Provision of hospitals with medical specialists

Work incentives should be provided for medical specialists (these actions should be addressed at the central level).

Education

Goal 33. Increase the efficiency of higher and vocational education through harmonisation with the labour market needs

Objective 33.1 Harmonise academic programmes with the labour market needs and increase the efficiency of vocational education through harmonisation with the labour market.

The labour market should be explored and sought-after specialisations should be identified. Specialisations sought-after in the labour market should be available in the Telavi University, Kachreti and Telavi vocational institutions. The logistical and training base of vocational institutions should be improved; the Kachreti and Telavi vocational institutions should be brought into conformity with the international standards. As a result, knowledge obtained by young people should meet the labour market requirements.

Goal 34. Improve the quality of pre-school and secondary education by rehabilitating child care centres and schools

Objective 34.1. Continue rehabilitation of schools

Rehabilitation of schools in the region as well as provision of schools with the required equipment should continue.

Objective 34.2 Continue rehabilitation of child care centres

The existing needs should be explored, assessed and considered in the budget. Rehabilitation of child care centres should continue.

Objective 34.3. Improve the quality of service in child care centres

Actions aimed at the introduction of standards for meals, educational programmes and hygienic condition in child care centre should be identified and assessed.

Goal 35. Improve the efficiency of education by introducing inclusive and informal education

Objective 35.1 Introduction of inclusive education

The objective involves exploring and identifying the needs of inclusive education and making appropriate provisions in subsequent annual budgets thus creating an environment for inclusive education in schools and pre-school institutions with the introduction of appropriate curricula.

Objective 35.2 Restore informal education

The condition of informal education facilities should be studied. Necessary estimates required for the rehabilitation of these facilities should be made; the existing needs should be considered in the budget and appropriate actions should be implemented.

Social Development of the Region

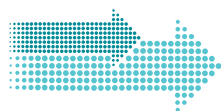
Goal 36. Improve demographic condition by stopping migration, promoting birth-rate and supporting families with many children

Objective 36.1 Promote birth-rates in all municipalities

Constraints should be analysed and birth encouragement policy should be developed (at the central level).

Objective 36.2 Prevention of youth migration

Construction of infrastructure for all-round development of youth (playgrounds, youth clubs, etc.) should continue. More jobs should be available to young people and, as a result, youth migration should decrease.





Objective 36.3 Additional social benefits for families with children

The needs of families with children should be studied. Based on this study, services should be identified, assessed and provisioned in the budget. This can be done in cooperation with special organisations and donors.

Goal 37. Increase the employment rate by improving qualification, creating jobs in agricultural and tourism industries, and establishing professional associations

Objective 37.1 Provision of qualified industry specialists

The objective involves exploring labour market needs and, on this basis, introducing appropriate curricula in vocational institutions and in the Telavi State University.

Objective 37.2 Create labour market opportunities

Infrastructure projects should continue, agricultural and processing industries and tourism should develop.

Objective 37.3 Development of necessary business management skills

Trainings on basics of business should be held at the Telavi University or at vocational institutions.

Objective 37.4 Development of industries through professional associations

Professional associations for agriculture, business and tourism should be established in rural areas.

