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Jointly preparing the conditions in the agricultural and connected sectors in the BSB area for the digital transformation (BSB Smart Farming)



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REGIONAL ANALYSIS (TEMPLATE)

Deliverable D.T1.3.1

**WPT1 – Investigation on the level of preparedness
for Smart farming in BSB area**

**Activity A.T.1.3. Common research on the level of
preparedness for Smart farming of BSB area countries**

17/03/2021





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SUMMARY

The Deliverable *D.T1.3.1. Regional analysis* constitutes a document that aims to provide conclusions and recommendations for the relevant BSB Smart Farming project partners countries agriculture and connected sectors.

It was produced during the implementation of *WPT1.1. Investigation on the level of preparedness for Smart farming in BSB area, Activity A.T1.1. Common research on the level of preparedness for Smart farming of BSB area countries.*

It is the outcome of work of PP4 partner in collaboration with BSB Smart Farming partners.

Joint Operational Programme Black Sea Basin 2014-2020

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Objectives of the investigation

The aim of this document is to present the results of the investigation in the Black Sea Basin (BSB) farming communities, that is in an urge need of becoming more competitive, sustainable and productive, by improving their businesses, production processes, products and services through a smart farming ecosystem, supported by the digitisation of services. The main objective of the research is to identify of the preparedness for smart farming in BSB Smart Farming project partners' country. This regional analysis will become part of the final synthesis report that aims to present specific recommendations on smart farming and IoT solutions to agricultural problems and identified constrains/basic needs of the main actors in the partner's countries.

There were more research activities conducted: primary research and secondary research. In the following sections it will be explained the main approaches that stand to the elaboration of this report, prepared with the collaboration of the BSB Smart Farming project partners, during the implementation of work package **T.1. Investigation on the level of preparedness for Smart farming in BSB area**, activity **A.T.1.3. Common research on the level of preparedness for Smart farming of BSB area countries**.

The present report started with the preparation of a common research methodology, applicable to every partner country participating in the project. The methodology is presented in Deliverable D.T1.1.1. Moreover, this research comes with results collected from a stakeholder's database of 600, 100 per country, and in-depth primary research and secondary research analysis. A desk research has been conducted using materials published in research reports and/or similar documents, available from public libraries, websites, data obtained from already filled in surveys etc. The resources used were the data available from the internet, governmental and non-governmental agencies collected and processed data, public libraries data, research and/or educational institutions data reports, commercial information sources like newspapers, journals, magazines, radio and TV interviews.

The focus was pointed on the overall situation, policies, quadruple helix stakeholders, projects implemented on both the agricultural needs/challenges of the rural communities and smart and IoT technologies that can be adopted to meet the needs/challenges.

Another research method was the elaboration of an online survey on the stakeholders needs, concerns, level of preparedness, regional digital entrepreneurship ecosystem and related opportunities. The online survey was conducted through a specific questionnaire elaborated during the implementation of the



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project. It included specific questions related to the stakeholders needs, concerns, level of preparedness, regional digital entrepreneurship ecosystem and related opportunities. There were created focus groups that offered support to the respondents in order to fill the proposed and agreed questionnaire, aiming the identifications of the smart and the IoT technologies that can address stakeholders needs.

In addition, a training needs assessment and draft estimation was conducted, in order to identify the current level of competency, skill or knowledge in the project specific field. In case of BSB Smart Farming project the training needs assessment can be conducted the following phases as: the identification of the business needs, performing a gap analysis, assess training options, and finding training needs and training plans.

During the investigation on the level of preparedness for smart farming, in Black Sea Basing (BSB) partner countries, from the project consortium, all the stakeholders from the quadruple helixes were envisaged to be involved in the investigation. In order to obtain a detailed analysis of the regional BSB partners country areas level, the following quadruple helix figures were envisaged: farms, farmers, regional public and national public authorities, sectoral agency, infrastructure and (public) service providers, interest groups including NGOs, higher education and research institutes, education/training centres and schools, business support organisations, international organisation under national law and enterprises.

The main research questions raised in the investigation were:

- ❖ What are the agricultural needs of the rural and peri-urban communities that, when addressed through the application of smart technologies and IoTs, can lead to the poverty alleviation, improve the effectiveness and efficiency of use of the rural area resources;
- ❖ How is possible to address the agricultural local needs and identified constraints through IoT and smart technologies solutions to strengthen the development of smart farming in rural and peri-urban areas within BSB partner countries to decrease the poverty level and increase the efficiency of agriculture production and natural resources use? What smart and IoT technologies are implemented already in the country, which of the existing might be transferred from one country to another and what smart technologies and IoTs can in the future be designed and developed by the involved stakeholders and entrepreneurs in the BSB area to meet these needs effectively and efficiently, mobilising the local/regional resources to further fostering the competitiveness of the economies in the BSB area in answer to other main socio-economic challenges in the area, such as the brain drain, youth unemployment and brain waste.
- ❖ What are the successful use cases of smart farming in BSB partner countries and how we can adopt and widen it?



- ❖ How to strengthen the interactions between the relevant helixes, particularly how to boost research, innovation and business cooperation development?

In the investigation recommendations and conclusions on the level of preparedness for smart farming in BSB partner countries were drawn and will be presented in this deliverable. The recommendations are based on findings from the investigation achieved in Georgia.

Chapter 1. Georgia's background / situation

Georgia, or how we call it “Sakartvelo”, is located at the eastern shores of the Black Sea on the southern flanks of the main crest of the Greater Caucasus Mountains. It is bordered by Russia from the north and northeast, Azerbaijan from the east and southeast, Armenia and Turkey from the south. The capital of Georgia is Tbilisi. Georgia is a country of ancient civilization. Its territory was populated 1.7-1.8 million years ago. The archaeological excavations in the south eastern Georgia resulted in a discovery of the human remains the oldest inhabitant of Eurasia and referred to as the "First European". Georgia has very old and rich culture, country has its own, unique alphabet and language, spoken only in Georgia. Georgia is known to be the oldest wine region in the world. The fertile valleys of the South Caucasus, are believed by many archaeologists to be the source of the world's first cultivated grapevines and Neolithic wine production, over 8,000 years ago. Famous trade route, "Silk Road", which connected India and mid Asia with Europe crossed the territory of ancient Georgia, bringing contrasting civilizations and cultures in one place. At the height of its power, Kingdom of Georgia, ruled by warrior Queen Tamar, stretched from shores of Black Sea in the west to shores of Caspian Sea in the east and was one cultural and economic hub of the region. Other notable Kings are David IV the Builder and Giorgi V the Great. The first republic of Georgia (1918-1921) was very progressive and in many way ahead of its time. Georgia was one of the first states in the world which granted women the right to vote. Georgia was occupied by Soviet Russia in 1921, becoming part of the Soviet Union as the Georgian Soviet Socialist Republic. The current republic of Georgia has been independent since 1991. Since regaining independence the country suffered from the political and economic crisis for a while, but since 2000s has been developing steadily. Today, Georgia is a member of the United Nations, the Council of Europe, the World Trade Organization, the Organization of the Black Sea Economic Cooperation, the Organization for Security and Cooperation in Europe, the Community of Democratic Choice, the GUAM Organization for Democracy and Economic Development, and the Asian Development Bank.

Georgia covers a territory of 69,700 square kilometres and its population is about 3.75 million. Georgia is a unitary, semi-presidential republic, with the government elected through a representative democracy. Georgia has a two-level administrative structure of governance – central and local governments. Local self-governance is present in municipalities – self-governing towns and communities. At this point, local self-government is in force in 76 municipalities, including 64 self-governing communities and 12 self-governing cities. Municipalities have their own powers, as well as the statutory powers delegated by the central government. Local self-governance in municipalities is implemented by the local legislative (Sakrebulo- city assembly) and executive (Gamgeoba - municipal government) institutions.

Located in the Caucasus region, on the coast of the Black Sea, Georgia is geographically well-positioned as a gateway between Europe and Asia. The country is perfectly situated for easy access to most major European, Central Asian and Middle Eastern markets and has free trade agreements (FTAs) with most of them. In this way, Georgia already boasts the majority of the preconditions required to become a regional financial and business center. Georgia is a member of WTO and has Most-Favored-Nation (MFN) status with member countries. Georgia has GSP agreements with the US, Canada, Switzerland, Norway and Japan. Georgia has a free trade agreement with Turkey and Ukraine and preferential access

to most countries of the former Soviet Union. Georgia also has a Deep and Comprehensive Free Trade Area Agreement (DCFTA) with the EU, which implies that agricultural products exported from Georgia will freely reach the EU market. In keeping with the European Union–Georgia Association Agreement that came into force in July 2016, the Government plans to harness the gains of deeper integration by promoting the reallocation of capital and labor to more productive industries, building supporting firms to comply with the harmonization of the legal and regulatory frameworks, and upgrading state institutions to improve trade facilitation, reduce technical barriers to trade, protect intellectual property rights, and develop the country’s human capital.

Georgia is the birthplace of wine according to a number of the world's competent experts. The mention of the ancient traditions of vine growing and high quality wine growing in Georgia (or Colchis and Iberia, as it was known in ancient times) can be found in the works of Homer and Apollonius of Rhodes. Even the unique Georgian alphabet is modeled after the shape of the vines curly offshoots. Up to 500 indigenous grape varieties are still cultivated here. Wine is part of Georgian heritage including architecture, poetry, and songs, and is associated with celebrations, holidays, rituals and most importantly with Georgia's religion the Christian Orthodox Church. Georgia has an 8000 years history of continuous wine making tradition, which is evidenced by numerous archaeological discoveries. Winemaking remained the basis of the Georgian economy for centuries. Through the long history of the Georgian nation, the vine has gained iconic significance in Georgia. It is a symbol of regeneration, of wealth and plenty.

Georgia is rich with various ecosystems, habitats and their associated species, including the types of species, which are used for or can be potentially used for food or other products. Georgia’s biodiversity insures the provision of ecosystem services that are necessary for human life. These services include timber and non-timber forest resources, clean water supply, prevention of erosion, and landslides and the mitigation of their impacts, recreation, tourism, livestock food supply, food and medicinal plants and traditional livestock keeping. Georgia has a very rich flora and fauna. Approximately 4,100 plant species are represented throughout the country, among which, 800 are endemic species. It should be noted that some of these species have nearly disappeared and are now included on the country’s Red List. Many species of animal that are in Georgia are very rare globally and are included on the Red List of International Union for Conservation of Nature (IUCN). Georgia is one of the centres of cultural plant origin and diversity. With regard to conservation, especially noteworthy is that there are plants that are cultivated from ancient times (endemic species and local varieties/landraces) and their wild relative species (as a source of cultivation of local species). Many excellent varieties of vines, cereals, and fruit and so on were formed in our country.

Georgia’s strong record of economic reforms and improved living standards is being threatened by the impact of COVID-19. The country’s economy grew robustly at 5.3 percent per annum between 2005 and 2019, despite major shocks. Poverty declined from 30 percent in 2005 to 14 percent in 2019 (using the US\$3.20 purchasing power parity [PPP] 2011 international poverty line). The COVID-19 pandemic, however, will reverse some of these past gains. The country is expected to slip into a deep recession in 2020 (a 6 percent contraction), with severe job and income losses, which could push poverty up by 2.8 percentage points.

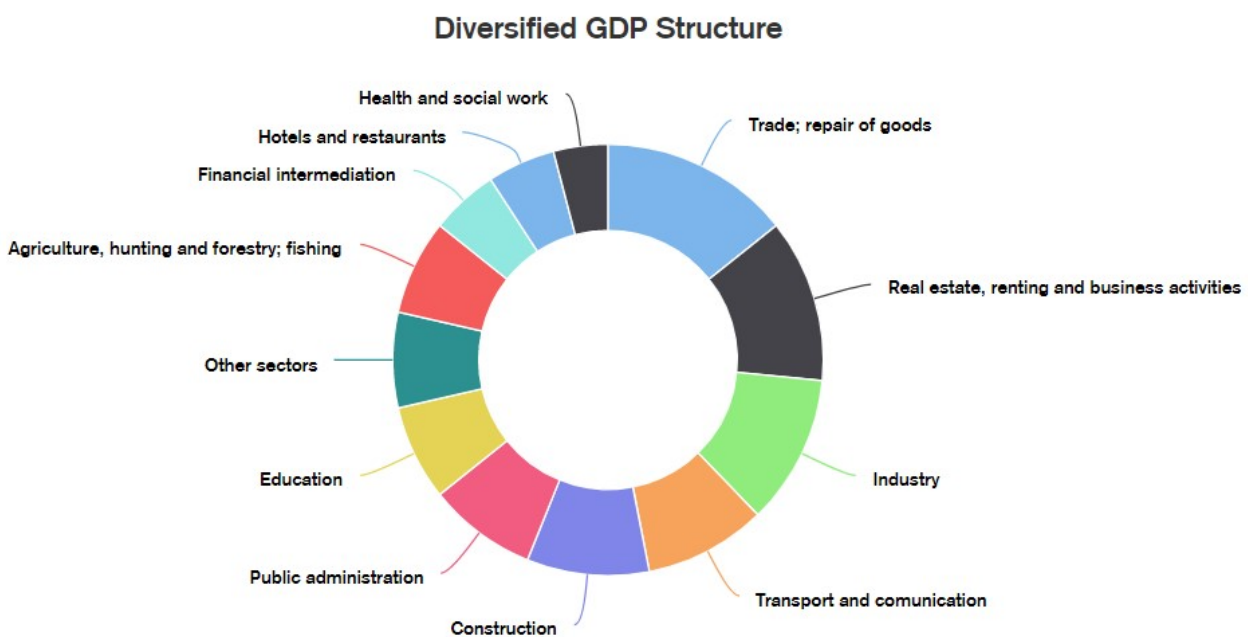
The country has a sound macroeconomic framework, an attractive business environment, and robust public financial management arrangements that are expected to support the post-

COVID recovery. Georgia’s governance indicators typically exceed Europe and Central Asia and upper-middle-income country averages (World Governance Indicators). The country also remains one of the most business friendly countries globally, placing seventh out of 190 countries in the World Bank’s Doing Business 2020 rankings.

The country has a shared consensus on national priorities, including participation in Euro-Atlantic integration, more efficient government, stronger growth, and a better functioning welfare state. This has paved the way for the signing of an Association Agreement with the European Union (EU) in 2016, including a Deep and Comprehensive Free Trade Area preferential trade regime. The latest progress report, adopted by the European Parliament on September 17, 2020, confirmed Georgia’s continued progress on the implementation of the agreement. Free trade agreements with major trade partners, such as the EU and China, position Georgia well to attract foreign direct investment (FDI).

Today, Georgia has a strong investment offer - It has a stable and growing economy, thriving cities, and competitive costs for operating business. The country is making huge amounts of investments in infrastructure and education to support tomorrow’s demands of large-scale impact investments. When combined with the country’s strategic location, it’s attractions are clear to international investors. Since emerging from the collapsing Soviet Union and regaining independence in 1991, effective reforms in economic policies and governance have earned Georgia a reputation as the top regional and global reformer.

Georgia has diversified GDP structure which is well-positioned for sustainable growth. Due to the devaluation of GEL to USD, the total GDP pointed in USD shows a drop in 2015 but actually GDP real growth rate in 2015 was 3.0%. The GDP compound annual growth rate from 2015 to 2018 reached 4.8 % and Georgia is widely expected to maintain steady growth for the years to come.



- Brief description of Georgia agriculture and history

Georgia is rich in agricultural tradition, which is an integral part of its history, mentality and cultural heritage. Agriculture played an important role in the formation of Georgian statehood and contributed much to its economic development. 43.4% (more than 3 million hectares) of the whole territory of Georgia is designated as agricultural land, which also includes pastures and meadows. 43% of the remaining area is covered with forest. Georgia has a wide variety of ecological and climatic zones conducive to the growth of temperate climate and subtropical crops. Those crops include cereals, early and late vegetables, melons and gourds, potato, technical crops, grapes, subtropical crops, fruit varieties etc. As mentioned above Agriculture is a major source of employment and income for Georgia's rural population. Currently, 43% of the total workforce is engaged in agriculture, while 97% of those people are self-employed. There are few opportunities for finding alternative employment in rural areas. In 2015, added value in agriculture (state GDP) amounted to 2,507.6 million GEL, while real growth was 1.5%. According to 2015 data, agriculture made up 9.1% of Georgia's GDP. 48% of the added value generated in primary production comes from cattle-breeding, while 21% is derived from the production of fruits and nuts, as well as from agricultural crops used for the further production of drinks and spices. The added value created in food processing in that period was about 1,827.8 million GEL, contributing 6.7% to overall GDP. Approximately 39% of the added value created in food processing came from household-based food processing. The production of spirits also makes up a significant share. Agricultural land, including pastures, is spread over more than 3 million hectares in Georgia (43.4% of the territory), while 43% of the rest of the territory is covered by forests. According to the 2014 Agricultural Census, approximately half of the land (47.9%) possessed by households is arable land, 30% of which is uncultivated. One of the main obstacles in the development of agriculture and increasing its competitiveness is land fragmentation caused by land reforms made during the country's most difficult political period (1992-1998). According to the 2014 census, 73.1% of landowners possess land of up to 1 hectare, 25.5% of landowners own land as large as 1 - 5 hectares, and only 1.5% of landowners possesses more than 5 hectares of land. The problem is compounded by the fact that 1 hectare of land owned by a single household is usually divided into 2-3 separate plots. Therefore, the development of a profitable and economically-viable agriculture sector without land consolidation is impossible.

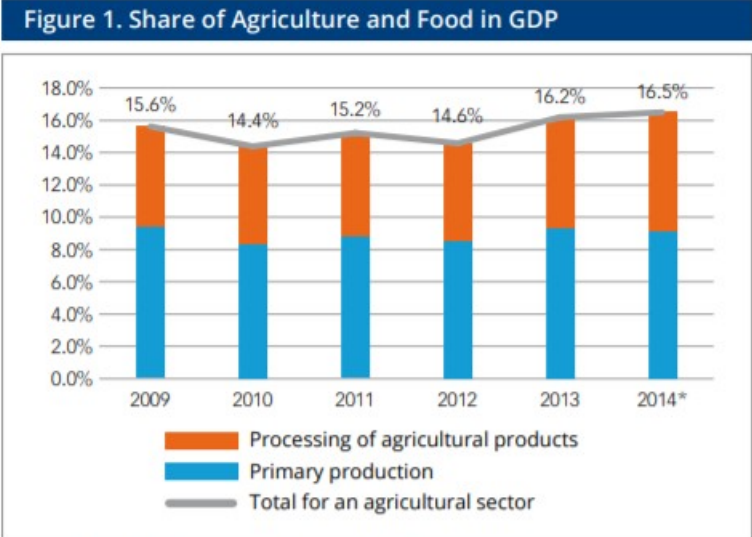
From climatic zones perspective, Georgian biosphere is very diverse and is determined by the existence of 12 different zones and 49 types of soils. Many endemic species create a perfect source for the development of plant growing and cattle breeding. The country is rich in amelioration and potable water resources. From the farming industry standpoint, the diversity is accompanied with difficulties like temperature swings, active erosion and excessive precipitation in some regions. The existing situation takes specific measures to be addressed. Given specific features of its terrain, Georgia is characterized by altitudinal zonality. Only 39% of arable land is located at an elevation of 500 meters above the sea level, 29% - 500-1000 meters above the sea level, 21%- 1000-1500 meters and 11% is located over 1500 meters above the sea level. Georgia has favorable climatic and natural conditions conducive to development of agriculture. However, within the past decades Georgian agriculture and food production has been lagging well behind other sectors of the economy. Rural development has an important role to play in the sustainable development of Georgia. Evidence from the experience of European Rural Development Programmes confirms the role that rural development can play in terms of increasing the welfare of rural populations and reducing the economic imbalance between rural and urban areas.

Georgia traditionally has well-developed livestock and plant production. The country is characterized by its complex landscape and diversity of soil conditions. The country is divided into 13 zones, each with specialized agriculture oriented at viticulture, horticulture, fodder production, livestock production, beekeeping, suburban agriculture, tea growing, subtropical crops and even tobacco production. The major industries are viticulture, livestock and fruit (especially citrus) production. Vines and wheat are of especial interest, as Georgia is considered to be the origin of vines. Scientists believe that Transcaucasia is the place of origin of wheat, some 12 species and 30 subspecies of wheat, of which two, Makha and Zanduri,

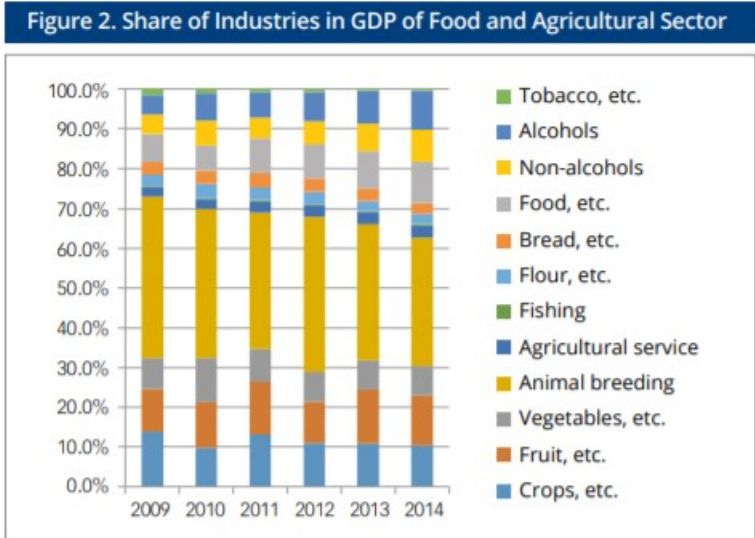
are found only in Georgia.

More than 3 million hectares of the land in Georgia is agricultural. According to the 2014 Agricultural Census, approximately one-fourth (788 thousand hectares) of the land is privatized, i.e. owned by agricultural holdings, while 99.65% of those holdings are households.

Georgian Agriculture in Numbers

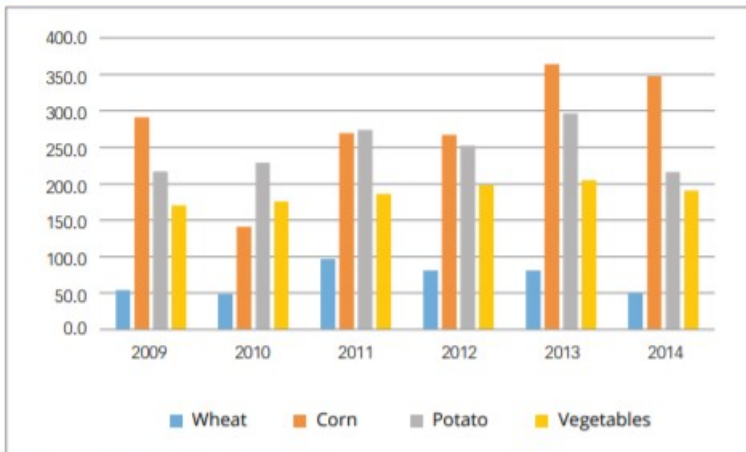


Source: Office for National Statistics, Calculations



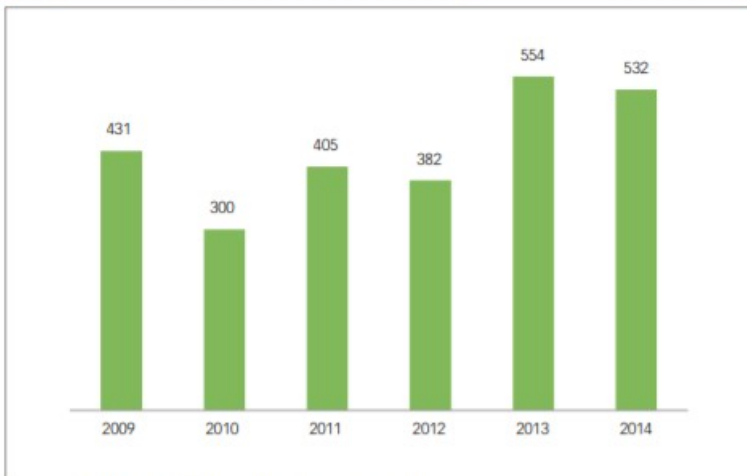
Source: Office for National Statistics, Calculations

Figure 5. Production of Annual Crops, 1000 tons



Source: Office for National Statistics

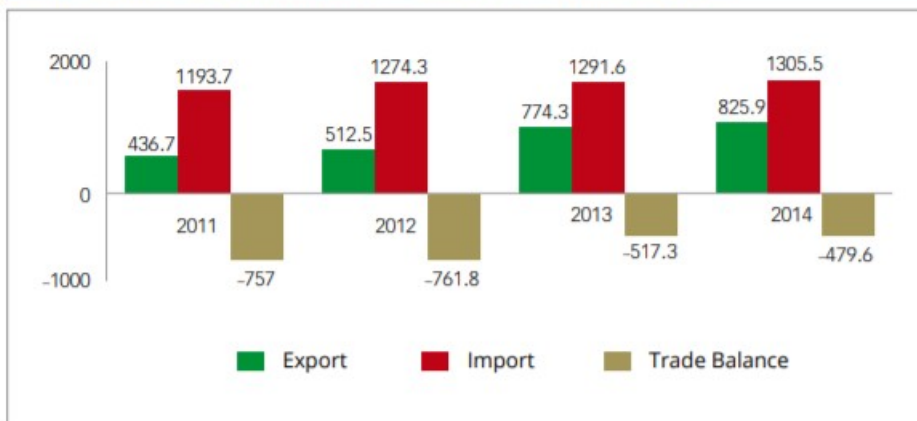
Figure 6. Production of Perennial Crops, 1000 tons



Source: Office for National Statistics, Calculations

In recent years the export and import of agricultural products has been characterized by growth trend. The agricultural products' export growth rate was always higher than import.

Figure 14. Trade with Agricultural Products (million USD)



Source: Office for National Statistics, Calculations

The export of agricultural products amounts to 30% of overall export. Among the important export products are hazelnut, wine, mineral and fresh water, cattle, non-alcoholic sparkling beverages, sheep and citrus. Furthermore, the important export partner countries are Russia, Ukraine, Azerbaijan, Kazakhstan, Germany, Armenia and Italy. The major imported agricultural products are: wheat, tobacco, poultry meat, sugar, alcoholic beverage, pork, flour-based confectionery, food additives, vegetable oil and fish. The most important importing countries are Russia, Ukraine, Turkey, Brazil, Germany, USA and Armenia.

Chapter 2. Agriculture policies in Georgia

- Local/regional/national policies in agriculture and connected sectors
- Institutional changes to improve performance in agriculture

Agriculture, tourism and rural development are of great importance for the sustainable economic development and inclusive economic growth of the country. Since 2012, the Government of Georgia has taken important and unprecedented steps for the country for agriculture and rural development, which is reflected in large-scale state investments in these areas. Nevertheless, Georgia's rural area still faces many challenges.

The implementation of the Agriculture and Rural Development Strategy 2021-2027 will address the existing challenges and make a significant shift in the direction of socio-economic development in rural areas.

Maximum utilization and targeted use of Georgia's agricultural potential is vital for the country's economy. That is why the first guarantee of achieving positive results will be the development of a clearly defined, competitive production policy and the promotion of financial resources in this sector of the economy. At the same time, the issue of ensuring the country's food security and food safety is especially important, which is a key responsibility of the Government of Georgia. The development of rural areas in Georgia is important for solving such tasks as: food security, environmental protection, economic development, creating a high standard of living and state security.

The introduction of integrated natural resource management practices in the country plays an important role in rural development, in particular the sustainable management of forest resources, which "ensures continuous direct or indirect benefits and resources for the country's population and the functioning of various sectors of the economy, human well-being."

Eradicating poverty and creating an environment conducive to the sustainable development of the country.

The 2021-2027 Agriculture and Rural Development Strategy is based on the experience and results of existing strategies, the reforms implemented and the experience of the European Union. The strategy is developed based on the analysis of the agricultural sector and the current situation in Georgia and it reflects the existing assessments, implemented and ongoing programs. The strategy envisages the priorities of the Government of Georgia and sectoral or multi-sectoral development directions, which are related to agriculture and rural development.

Evidence from the experience of European Rural Development Programmes confirms the role that rural development can play in terms of increasing the welfare of rural populations and reducing the economic imbalance between rural and urban areas. The rural potential to deliver innovative, inclusive and sustainable solutions for current and future societal challenges such as economic prosperity, food security, climate change, resource management, and social inclusion should be better recognised. Rural and agricultural policies should build on the identity and tendencies of rural areas through the implementation of integrated strategies and multi-sectorial approaches. They should promote diversification and foster entrepreneurship, investment, innovation and employment. These policies should also add value to rural identity and enhance sustainability, social inclusion and local development, as well as increase the resilience of farms and rural communities.

An integrated and strategic approach to energising the rural areas of Georgia would consist of a package of measures, which would improve the livelihoods of rural populations, while at the same time protecting and enhancing their cultural heritage and the natural environment within which they live. Such measures might include the promotion of diversified economic activities, the development of new economic opportunities for the local population, and the uptake of innovations and modern technologies in agriculture, the support for an increase in the production and promotion of agriculture products, the increase in the competitiveness of the farming sector, and help enable the sustainable management of forest and natural resources. Social inclusion and the active participation of the local population in the identification of solutions to address their needs is also of outmost importance. At this point, Georgia has no integrated rural development policy. However, rural development policies and programmes are successfully being implemented among EU member states, as well as in many other countries throughout the world.

According to Chapter 10 (Agriculture and Rural Development) of the Association Agreement between Georgia and the EU signed on June 27, 2014, Georgia has an obligation to adopt an agriculture and rural development policy that is compliant with EU policy and European best practices. Georgia also has an obligation to harmonize the country's legislation with European legislation and expand the power of the central and local governments in order to comply with policy planning and evaluation frameworks that meet European standards. "The Parties shall cooperate to promote agricultural and rural development through the progressive convergence of policies and legislation" (Article 333, Association Agreement). The EU's, six priorities for rural development through 2020 address economic, social and environmental challenges: 1. Fostering knowledge transfer and innovation in agriculture, forestry, and rural areas 2. Enhancing farm viability and competitiveness of all types of agriculture in all regions and promoting innovative farm technologies and the sustainable management of forests 3. Promoting food chain organisation, including the processing and marketing of agricultural products, animal welfare and risk management in agriculture 4. Restoring, preserving and enhancing ecosystems related to agriculture and forestry 5. Promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors 6. Promoting social inclusion, poverty reduction and economic development in rural areas.

The Regional Development Programme of Georgia is a medium-term government document setting out main goals in Georgia's regional development and determining priorities and

measures for the period 2018–2021. The Programme follows up on the national planning documents: the Social-economic Development Strategy of Georgia (“Georgia 2020), the State Strategy for Regional Development 2010-2017 and the Regional Development Programme 2015-2017. The Programme’s strategic vision and delivery modalities are in line with the European Union recent approaches to social-economic cohesion policy, including territorial integrated interventions and focus on the exploitation of territorially differentiated potentials. The Programme provides a coherent framework for public and private investments promoting regional development, enabling all stakeholders to concentrate resources along a single, common strategy in order to maximise the effectiveness and efficiency of intervention.

In 2012, in order to promote the development of agriculture, the Agriculture Projects’ Management Agency (APMA) was established under the Ministry of Agriculture of Georgia. The agency implements projects initiated by the Ministry of Agriculture. Currently, RDA(Rural development Agency), is administering the following state programmes:

- Plant the Future - Aims to use agriculture lands effectively by planting perennial crops
- Produce in Georgia - (agriculture component) Aims to develop production-oriented enterprises, create new enterprises and promote the development of existing ones in order to ensure the production/processing of agriculture products
- Agro Insurance - Aims to develop the insurance market in the agricultural sector, promote rural activities, maintain the income for people engaged in those activities and reduce the risks
- Co-financing of Agro Processing and Storage Enterprises - Aims to facilitate the development of agriculture processing, as well as storage facilities and services
- Preferential Agro Credit Program - Aims to encourage primary agricultural production, its processing and the storage-sale processes ,by providing farmers and entrepreneurs engaged in agriculture with access to long-term preferential financial resources
- Georgian Tea Plantation Rehabilitation Program - Aims to effectively use the potential of tea plantations already existing in Georgia, promote and facilitate the production of local tea (including bio-tea), increase the level of domestic supply and enhance export capabilities.
- Program of Agri-Production Promotion
- Young Entrepreneur-The program supporting young entrepreneurs in rural area, - “Young Entrepreneur” is designed for young people being residents of Georgia and desiring to conduct a business activity in Georgia.
- Program of Co-financing of Agricultural Machinery-The aim of the Program of co-financing harvesting agricultural machinery is to increase the access to harvesting agricultural machinery (any type of harvesting equipment, both self-propelled and trailers, except for grape harvesting equipment).
- Farms/Farmers Registration Project-The “Project of registration of farms/ farmers” regulates a system of the united registry of farmers/farms which will consolidate information on the entities employed in the agricultural activities, their agricultural-economic activities and agricultural assets existing in their ownership/maintenance in the united electronic database.
- Agro-diesel support program-Under the program, individuals and legal entities owning a 0.25 to 100 hectare of agricultural land plots registered with the National Agency of Public Registry will be able to purchase diesel at a discounted price.
- Program of Stimulating Agricultural Land Owners-The program provides subsidies for the

cost of agricultural goods and plowing services. In order to receive the subsidy provided by the program, individuals and legal entities need to own a plot of agricultural land registered in the Public Registry.

- State Programme of Dairy Modernization and Market Access (DiMMA)-The goal of the State Program of Modernize the dairy industry and Market access is to develop the rural economy by promoting the establishment of a competitive, diversified and sustainable dairy industry.

in June 2014 the Ministry of Economy and Sustainable Development of Georgia, together with the Ministry of Agriculture, launched a new government program “Produce in Georgia.” The program’s objective is to promote an entrepreneurial culture throughout the country by stimulating the establishment of new enterprises and supporting the expansion of existing operations. Enterprise Georgia is the key implementing partner of “Produce in Georgia” and is responsible for business support, export promotion and investment in Georgia sectors. The Business division of the agency promotes entrepreneurial activity in Georgia by supporting entrepreneurs - assisting with the creation of new enterprises as well as the expansion and refurbishment of existing enterprises. The Export division promotes the export potential of the country by increasing the competitiveness of local products and the overall volume of goods directed towards international markets. The Invest division’s primary role is to attract, promote and develop direct foreign investment in Georgia. As the moderator between foreign investors and the Government of Georgia, the Invest division ensures access to updated information, provides an efficient means of communication with Government bodies, and serves as a “one-stop-shop,” supporting investors throughout the investment process.

- Produce in Georgia – a) A business component aimed at supporting enterprises – both new and existing ones – and providing them with new equipment, assisting in the growth of their competitiveness and enhancing export potential through improving access to the private sector and finance, property and technical assistance. b) A hotel development component, which aims to support entrepreneurs in constructing new hotels and/or developing existing infrastructure in the regions (except Tbilisi and Batumi). It also attracts international operators to enter the Georgian market and provides local operators the opportunity to obtain an international franchise (Management Contract).
- Facilitation of Micro and Small Enterprise development - This programme falls within the framework of the ‘Produce in Georgia’ programme, and is aimed at facilitating the growth of entrepreneurship in economically vulnerable regions of Georgia, and provide financial and technical aid to micro and small enterprises, support micro and medium business start-ups, support the quality enhancement of products and promote the diversification of local products on regional markets.

Supporting innovation

In order to facilitate the development of innovations and modern technology, in 2014 the Agency for Innovations and Technologies was established under the Ministry of Economy and Sustainable Development of Georgia. The agency aims to provide incentives for the development of innovations, advanced technology, the promotion of research and development (R&D), and to support their commercialization and use. The agency also sets out to support establishment of innovative start- up companies and enhancement of their

competitiveness. Currently, the agency is carrying out infrastructure projects in the regions that support innovation and technology development. Industrial innovation labs, regional hubs and innovation centers are being established, with the goal of raising the skills of the local population in the field of technology and innovation, encouraging innovative ideas, and facilitating their replication and commercialization.

Rural infrastructure

Rural infrastructure – particularly local and small-scale rural infrastructure – can be improved through well-targeted rural development interventions. Active participation and consultation with rural stakeholders is crucial in this process. As such, the Government of Georgia is implementing major projects in this regard.

These projects include:

- Rural Support Program. In order to develop rural infrastructure and meet other needs, the Rural Support Program was set up in 2009. The programme contributes to the financing of priority state infrastructure projects. The programme also allows for the provision of information and consultation with the local population regarding the projects. Funds allocated by the programme should be spent on construction, rehabilitation and/or improvement of the local infrastructure, providing equipment for public buildings, and/or the purchase of technology for long-term use. In addition, it must have a positive social and economic impact for the majority of the population.
- Fund for Projects Implemented in Regions. The Fund for Regional Projects finances both local and regional projects, including roads, underground utilities, sidewalks, the repair of water supply/sewage systems, bridges, the installation/repair of outdoor lighting; construction of drinking water wells, management of sewage systems and municipal waste management, and the repair/rehabilitation of residential and public buildings.

Providing the Agricultural Extension Service

Purpose of the activity: to support farmers and rural population engaged in agriculture in growing the agricultural crops, introducing new technologies and innovations for storing and processing the harvest, to enhance knowledge and to share experience, to promote the implemented and ongoing projects of the agency.

Ways of providing the consultations:

- Consultations at offices (legal entities, natural persons)
- Telephone conversations, text messages
- Visits of interested individuals (farmers) to land parcels
- Group meetings with farmers in the villages
- Meetings at community centers of the Ministry of Justice
- Emails and social networks

Technical Assistance

Introduction of international standards

Project beneficiaries: all the beneficiaries, who are financed with the purpose of setting up the processing enterprises within the framework of the project for co-financing the processing and storage enterprises, are obliged to implement ISO-22000 or HACCP international standards.

Georgian Amelioration

Given the climate conditions of Georgia, the issues of land amelioration, construction of irrigation and drainage systems, their operation and management are important, which should create all the necessary conditions for the intensive and effective agricultural production. Georgian Amelioration Ltd is a company supplying irrigation and drainage services to agricultural lands. The company provides the following services: to supply water to hydropower stations, enterprises and ponds. The company provides services to the entire country through its 20 service centers. With the purpose of increasing the fund of ameliorated agricultural lands, Georgian Amelioration Ltd carries out large-scale works for the rehabilitation of amelioration infrastructure that has been out of service for decades. Organizing the amelioration systems will significantly develop the agricultural sector. Average yield per hectare will improve and increase. In this respect, there have been significant breakthrough and achievements. The area of ameliorated lands increases every year, which creates an additional incentive for the rural population to get back to land cultivation.

The National Food Agency is the only agency in the country that carries out the state control in the areas of food safety, veterinary and plant protection, main function of which is to ensure the protection of human life and health through providing safe food products. The agency carries out its activities in all the regions of Georgia. The local population are able to enjoy the services provided by the National Food Agency for ensuring food safety, veterinary and phytosanitary reliability. State control of food safety aims at protecting human life, health and consumer interests, which is implemented based on the risk through the following mechanisms: inspection, supervisions, monitoring, sampling, and document review.

The Scientific-Research Center of Agriculture Carries out its activities in the following directions: to develop the agrarian science, agriculture and food production, namely: to

preserve agro-biodiversity of plants and animals, to support artificial insemination of animals and breeding activities, to test plant species and to revive the selection activities, to elaborate the standards and certification systems for seed and planting materials, to disseminate new technologies, to ensure risk assessments in the field of veterinary and plant protection, to elaborate bio methods, to develop bio farming and to support the extension of agricultural entities.

Main area of activities of the LEPL National Wine Agency is to support the development of viticulture and winemaking. To this effect, the National Wine Agency implements the following programs:

- Activities to support the promotion of Georgian wine
- Vintage support activities
- Activities for viticulture development
- Research and promotion of Georgian vine culture
- Laboratory research of wine

Chapter 3. Funding initiatives in Smart Farming from Georgia

The Government of Georgia is implementing state programmes for local economic development and promoting access to financial resources, physical infrastructure and modern technologies for the local population.

Since 2013, the Agricultural And Rural Development Agency has been implementing the following projects with state co-financing and technical support:

- 1 Preferential Agri-Credit Project
- 2 Co-financing of Agri Processing and Storage Enterprises
- 4 Agri-insurance
- 5 Plant the Future
- 6 Tea Plantations Rehabilitation Program
- 7 Program of Agri-Production Promotion
- 8 Young Entrepreneur
- 9 Program of Co-financing of Agricultural Machinery

Preferential Agri-Credit Project

The project has been implemented since 2013. The project goal is to support the primary agricultural production, processing, storage and sales of agricultural output through promoting access to finances for agricultural producers. Within the framework of the project, farmers and enterprises engaged in primary agricultural production, processing and storage-sale, get preferential agri-credit and agro-leasing from financial institutions for their fixed and current assets. There is a subcomponent for the agricultural mechanization added to the project's fixed assets component, within the frameworks of which the preferential agro-credits will be issued only for the purchase of agricultural machinery and/or implements. Credits/leasing are issued by commercial banks/financial institutions involved in the project (12 banks and 3 leasing companies), and the agency provides co-funding for loan interest rates/leasing fees. It should be mentioned that making the banking/leasing sector interested in the agricultural sector is one of the most important achievements of the project, which promotes the agricultural development.

The following interest rates apply based on the loan amount and purpose:

Agricredit for fixed assets, in case of the fixed interest rate:

from 20,000 GEL to 150,000 GEL, inclusive	no more than 16%
from 150,001 GEL to 600,000 GEL, inclusive	no more than 15%
from 600,001 GEL to 1,500,000 GEL, inclusive	no more than 14%

Agri credit for fixed assets, in case of the floating interest rate:

From 20,000 GEL to 150,000 GEL, inclusive no more than 8% added to the refinancing rate set by the National Bank
from 150,001 GEL to 600,000 GEL, inclusive no more than 7% added to the refinancing rate set by the National Bank
From 600,001 GEL to 1,500,000 GEL, inclusive no more than 6% added to the refinancing rate set by the National Bank

The agency provides the interest rate co-financing in the amount of 11%, for no longer than 66 months. For the grape processing enterprises, for which the total residual amount of their current preferential agrocredit(s) under the subcomponent ranges between 1,500,001 GEL to 5,000,000 GEL, the Agency provides co-financing of interest rate in the amount of 10%, for no longer than 24 months.

Agri-credit for agricultural mechanization, in case of the fixed interest rate:

from 20,000 GEL to 150,000 GEL, inclusive	no more than 16%
from 150,001 GEL to 600,000 GEL, inclusive	no more than 15%
from 600,001 GEL to 1,500,000 GEL, inclusive	no more than 14%

Agri-credit for agricultural mechanization, in case of the floating interest rate:

From 20,000 GEL to 150,000 GEL, inclusive no more than 8% added to the refinancing rate set by the National Bank
from 150,001 GEL to 600,000 GEL, inclusive no more than 7% added to the refinancing rate set by the National Bank
From 600,001 GEL to 1,500,000 GEL, inclusive no more than 6% added to the refinancing rate set by the National Bank

The Agency co-finances the interest rate in the amount of 11%, for no longer than 66 months.

Preferential agro-credit - interest rates within the agricultural framework of the state program Enterprise Georgia
From 1,500,000 GEL to 3,000,000 GEL, inclusive no more than 6% added to the refinancing rate set by the National Bank
from 3,000,001 GEL to 5,000,000 GEL, inclusive no more than 5% added to the refinancing rate set by the National Bank

The agency co-finances the interest rate in the amount of 10%.

Since the beginning of the Preferential Agri-Credit Project (March 2013) until 2019, inclusive, the following loans were disbursed throughout Georgia:

For current assets: 11,843 loans with the value of 534,229,056 GEL

For fixed assets: 28,386 loans with the value of 1,749,792,079 GEL. 7

In total, 40,124 loans with the amount of 2,260,082,131 GEL and 105 leasings with the amount of 23,939,004 were disbursed during 2013-2019.

There were 12,600 new jobs created since launching the Preferential Agri-Credit Project in 2013 until December 2018, inclusive. The number of actual employees is in fact more, because the obtained data is received only according to the indicators of beneficiaries who are registered as taxpayers.

Project - Co-Financing of Processing and Storage Enterprises

The project is comprised of two components:

- Processing enterprises co-financing component;
- Storage facilities co-financing component.

Processing enterprises and storage facilities are co-financed through the following sources:

- Co-financing by the Agency - no more than 50% of the total project value, but no more than 600,000 GEL;
- Preferential credit/leasing - no more than 1,500,000 GEL;
- Co-participation of beneficiaries and/or alternative funding source for project financing.

Program of Agri-Production Promotion

The program is implemented within the framework of Agriculture Modernization, Market Access and Resilience Project (AMMAR). The program is funded by the International Fund for Agricultural Development (IFAD) and the Global Environment Facility (GEF). The program started in 2016 and it is implemented by the Agricultural and Rural Development Agency. Primary processing component Program beneficiaries: farmers and commercial legal entities, which intend to upgrade existing orchards or to plant new ones, to arrange/upgrade greenhouse farming, to purchase agricultural machinery, to purchase anti-frost and anti-hail systems, to purchase the equipment required for primary treatment/processing of harvest and to arrange the infrastructure required for primary warehousing of their harvest. Main conditions of the program: a beneficiary gets co-financing from the state in the amount of 40% of the total project value; the beneficiary co-participation is 60%. For agricultural cooperatives, the maximum amount of state co-financing is the GEL equivalent of 150,000 USD and for other entities - the GEL equivalent of 15,000 USD. Component of processing enterprises and storage facilities Program beneficiaries: commercial legal entities, which are willing to modernize the existing processing/storage enterprises, or to set up new processing enterprises/storage facilities. Main conditions of the program: a beneficiary gets co-financing from the state in the amount of 40% of the total project value; the beneficiary co-participation is 60%. Maximum amount of state co-financing is the GEL equivalent of 100,000 USD.

Tea Plantation Rehabilitation Program

Goal of the program is to rehabilitate the state-owned and private tea plantations, to maximize the tea potential, to create modern tea processing enterprises and to promote the local tea (among them bio-tea) production. The program has been implemented since 2016. Within the framework of the program, legal entities (except the agricultural cooperatives), which own land parcels, will receive 60% of the funds needed for the

plantation rehabilitation, and in case of leasing the land plots, the co-financing volume will increase up to 70%. If the agricultural cooperatives own their land, they will receive 80% of the money required for plantation rehabilitation, and in case of leasing the land parcel - 90%. After the plantation rehabilitation, agricultural cooperatives will receive all the equipment and appliances required for primary tea processing from the state for free.

Program for Supporting Young Entrepreneurs in Rural Areas – “Young Entrepreneur” The program has been initiated by the Ministry of Environmental Protection and Agriculture of Georgia, and it has been implemented since 2018 by the N(N)LE Agricultural and Rural Development Agency, with the funding of the donor organization Danish International Development Agency (DANIDA). Program beneficiaries: individual entrepreneurs willing to start up a new business in the regions, aged 18- 35 in case of men, and aged 18-40 in case of women; agricultural cooperatives, founders/shareholders and board chairpersons/director(s) of which are men aged 18-35 and/or women aged 18-40. Basic terms and conditions of the program: within the frameworks of the program, funding is provided both for agricultural and non-agricultural business activities. The state co-finances no more than 40% (no more than 60,000 GEL) of the investment value of the project described in the business plan. The project investment value should be no less than 10,000 (ten thousand) GEL.

The Program “Plant the Future”

The program implementation started in March 2015 and its main goal is to effectively use the agricultural lands in Georgia through planting perennial cultures, as a result of which the imported products will be replaced by the Georgian ones, the export will grow, it will be easier to provide raw materials to processing enterprises, and the social-economic conditions of rural population will improve. The program Plant the Future consists of two components and one subcomponent: component for cofinancing of perennial orchards, component for co-financing nurseries, and subcomponents for financing the berries. Orchard component Under the component of perennial orchards, the following costs will be financed: 70% of cost of young trees, and in case of agricultural cooperatives, villages situated along the administrative border line and high-mountainous settlements - 80% of cost (maximum funding per young tree is determined), 50% of cost of drip irrigation system, and 60% of costs for the cooperatives with the agricultural status, villages situated along the administrative border line and high-mountainous settlements (it is determined

to allocate no more than 2,500 GEL per 1 ha for arranging the drip irrigation system). A beneficiary can participate in the state program Plant the Future several times; however, the total amount of the received funding should not exceed 250,000 GEL, and the total area or for the planted orchards should not be more than 50 hectares. Within the frameworks of the orchards component of the program, funding will be provided for planting at least 0.5 ha of perennial orchards by one beneficiary. Volume of co-financing should not exceed 10,000 Gel per 1 ha. The maximum limit for blueberries is 15,000 GEL per 1 ha. 28 Under the orchards components, at first, 70% or 80% of the cost of young trees will be financed, and from the remaining difference - the drip irrigation system will be financed.

Agricultural Insurance Program

Goal of the agri-insurance program is to develop insurance markets in the agricultural sector, to support agricultural activities, to maintain revenues for the individuals engaged in agricultural activities and to minimize the risks. The program has been implemented since 2014. Within the framework of the agri-insurance program, the farmers are able to insure their harvest against the hail, flood, hurricane and frost in the fall. Within the framework of the program, it is possible to insure the land area of no more than five hectares, except the grain crops, where the maximum land area is 30 ha. In case of agricultural cooperatives, the maximum amount of insurance premium is 50,000 GEL, and there is no limit for the area of the land to be insured. A farmer who purchases the insurance under the program, will get the funding to cover the following share of costs: 50 % - in case of insuring the vine 70 % - in case of insuring all the other crops.

Program of Co-financing the Agricultural Machinery

The state program for co-financing the agricultural equipment envisages co-financing the following agricultural equipment: Any type of harvesting equipment, both self-moving and attached; Agricultural tractors; Agricultural trailers (implement and rototiller). The amount of agency co-financing per beneficiary is no more than 50% of the cost of agricultural equipment to be purchased, but no more than 150,000 GEL. The agricultural equipment to be purchase should be new (not used), namely, it should meet 2 conditions: The agricultural equipment should be produced no earlier than two calendar years before its purchase; At the moment of purchasing, the agricultural equipment should have an effective warranty. The program beneficiary should be a natural person who is a citizen of

Georgia, or a sole trader, or a commercial legal entity registered in accordance with the law (among them, an agricultural cooperative, where the state does not have any share /stake/stocks).

Programs for Supporting the Development of Agricultural Cooperatives

There are many state programs implemented with the purpose of supporting the business-oriented farmers unions and agricultural cooperatives. In 2019, there was a registration announced for the programs focused on supporting the agricultural cooperatives in various sectors, which includes the financial support for the introduction of food safety international system for primary and processing enterprises, and for promoting the produced output. By 2019, within the framework of the “State program for the rational use of state-owned hayfields and grazing fields in high-mountainous regions”, total of 7,649 ha of hayfield and grazing fields were handed over to 23 agricultural cooperatives out of 38 cooperatives participating in the program, with the 25 year leasing rights. these 23 agricultural cooperatives were received the tractors and trailer equipment with 90% co-financing. For the remaining 15 cooperatives, there are procedures underway as envisaged by the program for the handover of hayfields and grazing fields, and equipment as well. The goal of the state program for supporting the agricultural beekeeping cooperatives is it to improve the material and technical resources of beekeeping holdings of agricultural cooperatives, to improve the quality and to increase the volume of honey and other beekeeping products. Various types of beehives will be handed over to the entities participating in the state program, as a grant covering 30% of the cost. There were seven applications registered as the results of the registration announced within the framework of the program. 37 State program for supporting the dairy producing agricultural cooperatives aims to promote the production of milk and dairy products in Georgia. Within the framework of the program, the agricultural cooperatives registered in high-mountainous settlements will receive 95% co-financing for purchasing the milk processing equipment and appliances, with no more than 150,000 GEL, and 90% co-financing in the remaining territory of Georgia, with no more than 150,000 GEL. There were three applications registered as a result of the registration announced within the framework of the program. State program for supporting the viticulture agricultural cooperatives aims to support processing of grapes produced in the country, among them those produced by agricultural cooperatives; to set up the grapes receiving-processing enterprises equipped with modern technologies within the frameworks of agricultural

cooperatives; the agency co-financing includes no more than 90% funding for purchasing the equipment and appliances required for processing no less than 100 tons of grapes, with no more than 500,000 GEL, and 95% of funding in a high-mountainous settlements, with no more than 500,000 GEL. There were 8 applications registered as a result of the registration announced within the framework of the program. State program for branding and introducing the international standards at agricultural cooperatives aims to support the cooperatives to ensure that their production processes are compliant with European standards, and it also aims to promote their output. In case of threats analysis and introduction of system of critical control points, a beneficiary will cover no less than 10% of service fee, and the Agency will cover no more than 90%, where the maximum amount shall not exceed 13,500 GEL. When engaged in the branding component, an agricultural cooperative can request co-financing for the purchase of equipment needed for finalizing/branding the products. No less than 30% of equipment costs will be covered by the beneficiary and no more than 70% - by the Agency, where the maximum amount shall not exceed 10,000 GEL. There were 4 applications registered as the result of the registration announced within the framework of the program.

Projects initiated with the financial support of donor organizations in the field of environmental protection and agriculture:

Food for Progress Donor - United States Department of Agriculture (USDA) 156 A 5-year project (2018-2023) “Investing in safe and quality cattle breeding”, which aims at enhancing the competitiveness of representatives of cattle breeding, dairy and meat producing industries in Georgia, and enhancing the volume of added value created locally in these sectors. In order to reach this goal, the project will support to improve food safety and quality standards, develop the business models, enhance the product quality, and introduce innovative and marketing instruments.

Rural and Agriculture Development Project Donor: Austrian Development for a Corporation (ADC) A 4-year project aims to elaborate a rural development policy in Georgia, to improve the value chain, sustainable use of natural resources, and to develop environment friendly agricultural practices. EU for Environment Donor - European Union Goal of the 4-year project is to assist the EU partner states to maintain and better use their natural capital, enhance the environmental welfare of all population and seize new opportunities emerged in regard to the development.

Hazardous Waste Management Project of Georgia - Investments Donor: EBRD European Bank for Reconstruction and Development The project will support the establishment of management system for non-hazardous waste, which is not harmful for the environment, and will ensure a clean and safe environment. Within the framework of the project, the hazardous waste will be collected, treated and separated in accordance with the European standards.

Hazardous Waste Management Project of Georgia - to support the project implementation, corporate development and stakeholder engagement Donor: EBRD - European Bank for Reconstruction and Development The project will support the implementing partner in regard to sales, tender preparation and evaluation, financial control, project management and reporting.

Capacity Building for the Ministry of Environmental Protection and Agriculture while Nationalizing the Sustainable Development Goals, for Speeding up the SDG Implementation Donor: Food and Agriculture Organization Goal of the project is to raise awareness of the Ministry of Environmental Protection and Agriculture and other stakeholders, into building capacities in regard to sustainable development goals, to ensure that the 157 goals are implemented, and monitoring is carried out in a focused way, with more engagement of agencies, under a clear coordination. As a result, the Ministry will be able to overcome the difficulties identified in the process of nationalization of Sustainable Development Goals, their implementation and monitoring. Within the framework of the project, technical seminars will be held for the representatives of the Ministry and local stakeholders on awareness raising and capacity building. Also, the project will assist the Ministry to implement SDGs related to agriculture, and to carry out the biannual monitoring action plan.

Conservation of landscape biodiversity at Chachuna protected area, in support to its revival Donor: Society for nature conservation (SABUKO) The project aims at implementing the procedures related to the restoration of rainforests at Chachuna protected area (Chachuna sanctuary); to conduct restoration works at the pilot pasture with the area of 900 hectares, with the purpose of restoring the environmental processes, biodiversity and productivity in this section. With the purpose of long-term sustainability, to manage the grazing process by involving shepherds and other local stakeholders dinner regeneration activities. Youth for Sustainable Development:

Establishment of Democratic and Peaceful Society Based on Environmental Activities. Donor: EUMM mission of the European Union to Georgia There were eco-clubs created

at schools in the occupied/breakaway territories (Gali and Ochamchire), which carried out community-based environmental initiatives and participated in joint activities, among them, in cooperation with Georgian schools.

The European Neighbourhood Programme for Agriculture and Rural Development – ENPARD II Donor – European Union Assessment was carried out in regard to the indicators planned for the third (last) installment of the second phase of ENPARD (ENPARD, Phase I, Phase II), also for the indicators of the second instalment of the third phase, after which the instalment for the second and the third phases were transferred in September. At this stage there are negotiations underway for initiating the fourth phase of the European Neighbourhood Programme for Agriculture and Rural Development (ENPARD, Phase IV). Within the framework of ENPARD II, start with the Ministry of Agriculture were trained, local action groups were formed in 10 municipalities, 95% of food inspectors were trained, food business operators who registered in the registry of economic activities, will be inputted into the database of the National Food Agency. The farmers registry program was elaborated, and currently more than 107,000 farmers / holdings are registered there; law on the seed production was drafted and approved too; and national strategies for rural development in extension were drafted and approved.

Capacity building for sustainable wildlife management Donor - Food and Agriculture organization (FAO) “Proposals and recommendations for the regulatory policy on sustainable management of the hunting sector“ were drafted and submitted to the Ministry. Based on the recommendations contained in the above-mentioned document, the LEPL National Wildlife Agency was created with the purpose of regulating the field of wild animals and flora management. An instrument was developed for diagnosing the legislative gaps for separating the sustainable hunting in Georgia. The diagnostic instrument for gap analysis represents a conceptual framework, which makes it possible to compare and establish consistency of the Georgian legislation on hunting with the existing international legal instruments (conventions, treaties, directives, etc.).

Support to the improved management of forest and landscape in Georgia Donor – Global Environment Facility, United Nations Development Programme (UNDP), World Resources Institute (WRI) The Forest and Land Use Information and Decision support system (FLUIDS) was created based on the web technology (Forest and Land Use Atlas

<https://atlas.mepa.gov.ge/>) and a portal (server) of Geographic Information System <https://gis.mepa.gov.ge/>.

Applying landscape and sustainable land management for mitigating land degradation and contributing to poverty reduction in rural areas Donor – Global Environment Facility (GEF) 160 Adequate legal, policy and institutional framework on landscape - sustainable management of land resources was developed at the national level, and awareness was raised on the issues of sustainable management of land resources.

Small Grants Program Donor - Global Environment Facility (GEF) 18 new initiatives of NGOs and community organizations started in various regions of Georgia within the framework of six the working phase of the small grants program in 2019, which will make a significant contribution to the protection of the unique natural environment of Georgia, also to the activities related to climate change.

Establishment of the national system for pest monitoring and forecasting Donor - United Nations Food and Agriculture Organization (FAO) A list of pests with so called economic significance was made within the framework of the project. Relevant manuals were elaborated in accordance with this lists, with the purpose of monitoring the pest population and forecasting their development. Specialists of the regional division of the National Food Agency were trained for ensuring the effective usage of manuals. The project's important components were also the promotion of contemporary plant protection methods in Georgia, namely, Integrated Protection Methods (IPM) were used in two pilot plots (for vegetables and fruits), and then based on these plots, a so-called the farmers schools practice was introduced in the country for the first time.

Adaptation of remote sensing methods in water resources management and assessment of extreme hydrometeorological situation in Georgia Donor - Slovak Agency for International Development Cooperation (SlovakAid).

Improving Trade Opportunities in Horticulture Donor - EU-EBRD-FAO European Union - European Bank for Reconstruction and Development – United Nations Food and Agriculture Organization (UN FAO) The project significantly supported the development of horticultural sector in Georgia through various activities, information sharing about technologies, and markets or other activities.

Support to Sustainable Value Chains through the Development of Geographic Indications in Georgia Donor - European Bank for Reconstruction and Development / United Nations

Food and Agriculture Organization Institutional capacities in geographical indications was strengthened;

Agricultural Education Donor – United States Department of agriculture (USDA) 162 Training courses were held for the specialists engaged in the agricultural sector. Cochran Fellowship Program (CFP) Donor - United States Department of agriculture (USDA).

Identification of typical Georgian foodstuffs “terroirs” Donor – Czech Republic Within the framework of the project, the typical Georgian foodstuffs/terroir-based products were studied/inventorized in Tusheti and Mtskheta-Mtianeti regions. The study will create a basis for the promotion of identified terroir products and for advancing the business initiatives of local communities.

Agricultural statistics Donor - US Department of agriculture (USDA) The project has supported the National Statistics Office of Georgia to elaborate, publish and conduct quarterly surveys.

There are three main priority directions presented in the 2017-2020 Rural Development Strategy of Georgia, namely: economy and competitiveness, social conditions and quality of life, environment protection and sustainable use of natural resources.

The 2017-2020 Rural Development Strategy of Georgia and the 2018-2020 Action Plan includes 67 activities for 2019. The 2018-2020 Action Plan of the 2017-2020 Rural Development Strategy of Georgia envisaged 24 activities that fell under the responsibility of the Ministry of Environmental Protection and Agriculture of Georgia, with a total budget of 153,867,100.0 GEL. As of 2019, actual budget expenditure amounted at 162,687,757.6 GEL.

- Projects implemented in the agricultural field



Farms/Farmers Registration Project

🕒 Start 08.08.2018



The program supporting young entrepreneurs in rural

🕒 Start 28.02.2018



Program of Agro-production Promotion

🕒 Start 18.05.2016



Georgian Tea Plantation Rehabilitation Program

🕒 Start 18.01.2016



Plant The Future

🕒 Start 12.02.2015



agroinsurance

🕒 Start 19.08.2014



Co-financing of Agro Processing and Storage

🕒 Start 27.01.2014



Preferential Agrocredit Project

🕒 Start 27.03.2013

- Projects implemented in the smart and IoT technologies applied to agriculture



Technical Assistance to Support the Establishment of

🕒 Start 19.12.2018
🕒 Finish 19.12.2018



Japan's Non-Project Grant Aid for Provision of Japanese

🕒 Start 12.11.2018
🕒 Finish 12.11.2018



Environmental Protection of International River Basins

🕒 Start 12.11.2018
🕒 Finish 12.11.2018



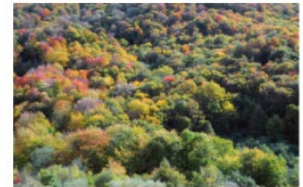
Preschool infrastructure assessment and support to

🕒 Start 01.04.2018
🕒 Finish 01.10.2018



Capacity Building for Sound Management of Chemicals

🕒 Start 01.01.2018
🕒 Finish 31.12.2020



Sustainable Development of Mountain Regions and their

🕒 Start 01.01.2018
🕒 Finish 31.12.2020



Technical assistance for the improvement of waste

🕒 Start 01.12.2017
🕒 Finish 31.12.2019



"Strengthening the administrative capacities of

🕒 Start 08.08.2017
🕒 Finish 08.04.2019



Strengthening Sustainable Management of Forests in

🕒 Start 01.02.2017
🕒 Finish 31.12.2018



🕒 Start 30.10.2018
🕒 Finish 13.11.2018



**Diseased Chestnut Forest
Restoration/Renewal Program**

🕒 Start 01.01.2016
🕒 Finish 31.12.2019



**Industrial Tangerine
Realization Support Program**

🕒 Start 01.11.2014
🕒 Finish 31.01.2017



**Project of Facilitation of Apple
Sale**

🕒 Start 10.09.2014
🕒 Finish 11.12.2014



**Small Farmers Assistance
Project**

🕒 Start 29.01.2013
🕒 Finish 31.12.2016



**Environmental Protection of
International River Basins**

🕒 Start 01.01.2012
🕒 Finish 31.12.2016

SWOT Analysis

Strength

- Economic growth and political stability
- A unique and rich natural environment recognised internationally
- Attractive environment for investments (including investments in agriculture)
- Growing sub-sectors of agriculture
- State investments in transport and energy infrastructure development
- Information and consultancy centers at the municipal as well as regional levels
- State programmes facilitating business and farm development
- State programmes aiming to improve the accessibility of public services
- Simplified land usage (land registration) procedures for the rural population
- Accumulated knowledge and experience from existing pilot projects (local action groups)
- Rich cultural and historic heritage
- High accessibility of school education
- Significant decrease in pocket spending on healthcare

Weaknesses

- Poor development of the value chain in every sector of agriculture (i.e. primary production, processing and storage infrastructure, marketing and sales)
- High level of land fragmentation
- Poor access to irrigation and drainage systems
- Insufficient use of modern technologies and knowledge
- Limited employment opportunities in economic activities other than agriculture

- Unequally and mostly poorly developed rural infrastructure (internal roads, drinking water and natural gas supply)
- Poorly developed cultural infrastructure
- Shortcomings in efficient use of land ownership rights (e.g. shortcomings in cadastral drawings due to non-existent or relevant standards for cadaster in previous years)
- Mostly poor access to public services due to distant locations of service provider institutions
- Shortcomings in sustainable use of water, land and forest resources
- Poor waste management infrastructure
- Weak mechanisms for inclusion of rural population in the process of revealing and solving the local needs and lack of skills for participating in existing mechanisms
- Poor access to vocational education for urban population
- Poor access to modern knowledge and technologies for rural population and lack of skills to use them
- Limited access to pre-school education

Opportunities

- Stable growth of tourism sector, including growing tourism in rural areas
- growth of competitiveness of local production on local as well as on international markets
- Growth of export of agricultural products on important markets, including EU market
- Improvement of social situation of local population through the development of cultural tourism
- Variety of products with protected geographic indications and names of origin
- Diversity of landscapes and efficient utilization of protected areas for local economic development
- Growth of awareness of Georgian agricultural products internationally and increase of export geography
- Efficient and maximum use of economic potential of sustainable use of water and forest resources
- Potential of development of profitable sectors of economy

Threats

- Decrease of population in villages
- High level of poverty in rural areas and low income of the rural population; Large share of families receiving social allowances in the total number of social allowance receivers
- Aging of rural population, especially in mountainous regions
- Negative impact of disastrous hydro meteorological phenomena (Hail, drought, floods, high winds, etc.) on agriculture activities in the view of if climate change
- In case of further unsystematic use of pastures, their degradation is unavoidable
- Continued and irreversible biodiversity loss
- Spontaneous household waste landfills
- On-going degradation of forest resources
- Contamination of surface waters by fertilizers and chemicals used in the agriculture among the others
- Relatively high level of leaving school in urban areas (especially by girls)

Investments in agriculture

Georgian agricultural sector has a great potential as Government of Georgia is committed to supporting the sector and is actively investing in agricultural infrastructure (irrigation/drainage systems). Moreover, the Deep & Comprehensive Free Trade Agreement (DCFTA) with the EU, which was signed in June 2014, gives us the opportunity to significantly increase exports to the European Union. The growing number of tourists adds attractiveness to the sector as local consumption increases.

Georgia has strategic location, which makes it perfect for forming regional hub for exporting agricultural products to region (Caucasus, Central Asia, other CIS countries). Georgia's natural resources and various micro-climatic zones are perfect for producing a wide range of grains, vegetables and hard and soft fruits, etc. There are over 21 micro-climates in the country. Soils are of volcanic origin located in the river valleys. They tend to be quite fertile and reasonably easy to cultivate.

IMPORT SUBSTITUTION OPPORTUNITIES

- Dairy production
- Pork & beef production

EXPORT OPPORTUNITIES

- Wine and mineral water
- Fruits and vegetables

SETTING UP PROJECTS IN AGRICULTURE VALUE CHAIN

- Storage and distribution infrastructure
- Processing plants
- Greenhouses

TRANSIT HUB

- Grain storage elevators
- Animal feed production



D.T1.3.1. Regional analysis