

Assessment of the Recreational Potential of Georgian Forests



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The Caucasus Environmental NGO Network (CENN), along with the Ministry of Environment and Natural Resources Protection, plan to develop the National Forest Agency Development Strategy Project to respond to challenges in the forestry sector and to comply with the Forest Code Project.

The field strategy should be based on an objective picture of the situation in the field in Georgia's forests and should integrate all development directions — taking into account the economic, ecological, and social functions of forests. It is important that once the strategy is developed, the government has a complete picture of the problems in the sector, and perspectives for development.

In assessing the potential of Georgia's forests, first of all it is necessary to analyse the recreational uses that would result in less pressure on forests, more economic benefits, and alternative incomes. It should also be noted that the National Forestry Agency does not have experience managing recreational forests, and there are currently no activities being carried out in this regard.

The National Agency of Protected Areas has been successful in management of recreational forests over the past 10 years and represents a great example for the National Forestry Agency. Approximately 75% of protected areas are covered by forest, and forest management is an important part of the management of protected areas. Consequently, it is very important that the Agency of Protected Areas share its experience with developing recreational forest management in Georgia with the National Forestry Agency.

The main purpose of the research is to analyse the practices of the Agency of Protected Areas for its interpretation of Georgian forests. These practices can be successfully utilised in the management of the Georgian Forest Fund, which should facilitate effective management of Georgia's forests while serving an economic function and developing local economies increasing local incomes. Georgia has the potential to become one of the most attractive countries for tourism development by focusing on forests' recreational value instead of obtaining timber.

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Introduction

The use of forest resources has been associated with timber extraction for centuries. Timber extraction for agricultural or commercial purposes has been going on intensively, and still is, in many economically developed countries, resulting in a significant reduction in natural forests. In some European countries, this process has become so intense that most natural forests have been destroyed, replaced by artificially created forests. Pine, spruce, and fir-trees generally dominate such forests; they are characterised by relatively rapid growth and are able produce high incomes at the expense of commercial use of timber. Such forests exceed 95% of European forests. As a result, the structure of forests has changed, negatively affecting biodiversity as well as the sustainability and recreational values of forests.

Forests can fully fulfil their conservation function only when in their natural condition, characterised by high levels of biodiversity. This kind of forest provides a range of global ecosystem services. According to Georgia's forest regulatory documents, the main purpose of forest management is not economic activity, but management that ensures the protection ecological and social functions of forests.

This approach to forests in Georgia was formed during the Soviet period, when it became clear that concerning the landscape and terrain of Georgia, intensive agricultural use of forests would destroy the protective, and other important functions, of the country's forests. For example, according to the Forest Code (1978 edition) in Soviet Georgia, forests with state importance had had mostly sanitary and recreational functions. A similar approach has been taken over into the current Forest Code, which states that "one of the objectives of the protection of the Forest Fund is preserving the identity of preserved forests, relict, endemic and other valuable species". In 2013, Parliament approved a national forestry concept aiming to establish a system of sustainable forest management which ensures the protection of forest biodiversity, effective use of forests' economic potential considering their ecological functions, adequate public participation, and a fair distribution of benefits.

In addition to traditional uses of forests, in recent years, the use of timber and non-timber resources, especially for recreational and tourism functions, have become important in Georgia. In today's modern and overcrowded world, recreational forest zones allow the public to reconnect with nature while relaxing. In addition, recreational zones contribute to higher quality home and work environments, improving public health, and economic growth. Given the current pace of urban development, where the urban population is rapidly increasing, nature tourism and ecotourism represent one of the fastest growing tourism sectors. In fact, a new reality is emerging where instead of extracting forest resources, alternative revenue from the maintenance of forests — from tourism and the service sector (hotels, hunting, restaurants, etc.) — is becoming more economically beneficial.

All this is especially interesting when there is a reduction in timber prices on the international markets and income generated from commercial use of timber decreases in the forestry sector. The industry has begun to search for alternative sources of income, and as a result, in many European countries, instead of extraction and processing of forests, new opportunities for non-traditional revenue streams, like the recreational/welfare function of forests, have been brought to the forefront.

As noted above, there are far fewer natural forests in most European countries than in Georgia, and the number is decreasing worldwide. In this regard, Georgia — with its natural and varied forests, aesthetically attractive landscapes, unique flora and fauna, endemic species, and networks of protected areas — is especially attractive for tourists, particularly nature and eco-tourists. Georgia's national cuisine, folklore, local culture, and traditions of hospitality, can significantly add to this tourism potential.

Recreational opportunities and unique landscapes create local and international tourism opportunities, especially in areas close to towns. Maintaining forest in such areas, and improving their visual appearance can become an important aspect of forest management. This implies the creation of a 'natural tourism environment', where landscape and views are given priority. This can create a situation that allows citizens to get closer to recreational areas as well as to rural lifestyle, and also provides new alternatives for generating income for the population (including regions).

The current situation affects the development Georgia's forestry sector, which is at an important stage of transformation, in a couple of ways:

- International competition, the decrease in the price of timber, and a reduction in revenue obtained from timber, hinders the development of the timber industry in Georgia;
- Due to Georgia's mountainous terrain, intensive extraction of timber is impossible, as a significant portion of forests are on steep slopes (30°–35° and greater);
- An important portion of Georgia's forests also serve protective (protecting settled areas and infrastructure from natural disasters) and ecosystem (water catchments, microclimate and biodiversity conservation, etc.) functions, which also reduce the possibilities for obtaining timber resources;
- International organisations claim that the Caucasus and Georgia are one of the most distinguished regions of biological diversity. This area is among the 35 biodiversity hotspots of the world. The biomes of the country include forests extremely rich in terms of biodiversity with more than 400 species of trees and bushy plants, 61 of which are endemic. It is also recognised that the biodiversity of the region is under serious threat, with forest ecosystems particularly vulnerable. Consequently, a significant portion of forest habitats carry global conservation value, and their agricultural use is unacceptable.

Considering these factors, intensive use of Georgia's forest timber resources is extremely limited for commercial purposes. Consequently, the issue of funding for forest resources management is open. The expenses incurred by the state for forest maintenance are significantly higher than revenue received from the sector. As a result, it is necessary to find alternative mechanisms for generating additional revenue. In this regard, interesting perspectives arise in the development of the tourism sector, which could significantly alter the general strategy of the use of the Georgian Forest Fund and refocus the future direction in a recreational direction. This research is based on the development of forests' recreational function, and the development of income streams from tourism.

From this point of view, the country has many important factors:

- Georgia has great potential for the development of many types of tourism, including natural and ecological tourism. In this respect, the forestry sector is particularly important, especially given the fact that almost 40% of Georgia's landmass is occupied by forest, most of which are natural forests.
- The bulk of Georgia's forests are natural forests, which is especially important in terms of tourism development. The use of this ecological tourism potential is extremely important for the socio-economic development of the country, and is one of the most important prerequisites for improving the economic condition of Georgia's population (including in urban areas).
- Conservation of the country's biodiversity is one of the most important tasks for managing the forestry sector and the National Forestry Agency and meeting international commitments. Restricting extraction of timber resources and developing forests' recreational function will protect biodiversity while generating alternative revenue streams.

- Georgia has a positive experience of using forests as a recreational resource. Such practices are widely implemented within the Georgian Protected Areas, where the practice and use of tourism potential (including the Forest Fund) have been intensively underway for several years.
- Based on practices oriented towards tourism development, it's possible to use a significant portion of the country's Forest Fund for recreational purposes. Thanks to this approach, the National Forest Agency may receive significant alternative revenue streams.
- It should be taken into consideration that tourism has a negative impact on the environment. Development of tourism cannot be done without proper care of ecology. An excess number of visitors may cause serious damage to biodiversity and cause environmental damage. The National Forest Agency has some advantages over the Agency for Protected Areas. The purpose of the Agency of Protected Areas is to maintain biodiversity, and the main task of the National Forest Agency is to maintain sustainable management of forest resources, and therefore tourism can be developed without restrictions.

Based on the above factors, it is possible to conclude that:

- 1) Development of tourism infrastructure in high conservation areas can act as an alternative source of income for the National Forest Agency.
- 2) Revenue can be generated directly by the National Forest Agency, for which it is necessary to create and develop relevant tourism infrastructure in the Forest Fund territories they manage.
- 3) An important potential source of revenue is the issuance of forest use licenses for commercial facilities (hotels, restaurants, resorts, etc.) and the mechanism, "the use of state forest fund with special purpose"
- 4) A source of substantial alternative revenue could come from hunting within the Georgian Forest Fund, which, together with conservation measures, should maintain biodiversity.

Nature protection in Georgia

Protection of nature has long history in Georgia, with such practices going back dozens of centuries at a community level. For example, many regions of Georgia had “iconic forests”, shrines and monastery forests where a considerable effort was put into protecting forests.

State level nature conservation also began in Georgia from an early date. A 1,189 year old certificate issued by Queen Tamar appears to be the first state decision dealing with the protection of forests and nature.

There are many examples of forest protection in Georgia in historical sources, as well as the use of forests and hunting facilities.

Establishment of protected areas and environmental protection in the modern sense started from 20th Century. The first official protected area — Lagodekhi Reserve — was established in the beginning of the 20th Century. After studies conducted by Professor of Tartu University Ivan Kuznetsov and professor of Caucasian flora and fauna, Polish researcher Ludwig Mlokoosvic, Lagodekhi Reserve came to the attention of the scientific community. These scientists pushed for Lagodekhi to be declared a reserve, but the issue was not resolved due to the absence of relevant legislation in the Russian Empire. In 1903 the territory was leased to the family of Demdomov himself and served as a nature reserve. From that period on, logging, hunting, fishing, and grazing was banned in Lagodekhi. Finally, in 1912, by the initiative of the Russian Academy of Sciences, 3,500 ha in Lagodekhi were officially declared a reserve.

In the Soviet era, the process of establishing new reserves continued. In the 1920s and 1930s, 28 new reserves were established in the country. Unfortunately, in 1951, most of these were abolished in the framework of the Natural Resources Mobilisation Plan. Only Lagodekhi Reserve survived. Later, after 1957, some of the old reserves were restored.

In 1958, the Supreme Council of the Georgian SSR adopted a law on the protection of nature. In this period the main aspects of nature protection were:

- 1) Creation and protection of biological and biophysical conditions;
- 2) Economic and natural resources protection and use thereof;
- 3) Aesthetics.

The 1958 Nature Reserve Law included processes in the forestry sector that were damaging to nature as well as the forest-farm sector, which focused primarily on successful achievement of economic goals.

In order to better protect valuable natural environments, state reserves and forestry and hunting farms were created in Georgia at this time. At the end of the Soviet period there were 15 reserves in Georgia, covering a total area of 168,800 ha — 2.4% of Georgia’s total territory. Reserves and hunting farms were governed by the local management and at central level by the State Department of Protected Areas, Nature Reserves and Hunting Farms.

Since the Soviet system mainly involved the principle of prohibition, nature in the reserves was strictly protected, and any kind of interference was prohibited by law. Often, the purpose of their creation was insufficiently justified and did nothing to solve complex problems. The emphasis was placed on forests alone and/or protection of a single species, while attention was not paid to other species, ecosystems, ecological processes, or socio-humanitarian aspects. In addition, there was no unified legal basis for the protected areas. Consequently, most reserves had low ecological efficiency and were based on prohibition alone.

Funding for the protection of nature in Georgia was allocated within one-year and five-year plans established in the Georgian Committee of Ministers. The state spent 250.1 million roubles on environmental protection and the rational use of natural resources in the Republic of Georgia in 1976–1980; in 1981–1984 this was 194.1 million. Funding for the protection of nature was carried out centrally from the state budget, taking into account the following characteristics: a) the area of protected areas; b) approximate number of protected cultures; c) amount of required staff; d) education of staff.

One more mechanism of protection was the organic and non-organic natural items listed in the SSR Red Book of Georgia. The Red Book was created by the Council of Ministers of the Georgian SSR on 5 July 1977 on the basis of resolution #546; it was issued in 1982. The book, as well as species of plants and animals, consisted of 30 organic (large specimens of trees) and 77 non-organic (rock pillars, caves, fossilised vegetation, canyons and valleys, volcanic forms, etc.) monuments of nature, some of which were located inside reserves.

Other elements of environmental protection existed in the Soviet era. Except for the reserves, as already mentioned, there were 5 forestry-hunting farms.

The situation has significantly changed after Georgia's independence. Independent Georgia in the transition to a market economy, despite a number of problems, has sought to implement environmentally friendly policies. The economic policy principles for the use of natural resources has evolved, which reflects the Law of Georgia on Environmental Protection. The main principles of the law are:

- 1) Risk reduction
- 2) Sustainability
- 3) Prioritising
- 4) Paid nature use
- 5) Polluter pays
- 6) Minimising waste
- 7) Public participation in decision-making

In addition to this law, in 1995–1999 alone, the Parliament of Georgia adopted 22 legislative normative acts in the field of environmental protection and nature, some of which involved the creation and management of protected areas. First of all, the Law of Georgia on the Protected Areas System, as well as the laws on wildlife, the Law of Georgia on the Red List and Red Book, the Forest Code of Georgia, and the Water Code of Georgia. These laws and their subordinate normative acts represent the mechanisms for maintaining wildlife as well as meeting the requirements of international laws.

The specifics of the Protected Areas and issues surrounding their management are presented in Annex 1

The forestry sector

Georgia's forests and biological diversity are one of the country's greatest assets. The sustainable development of the country is impossible without the rational use and preservation of this wealth. In 1994, Georgia signed the International Convention on Biological Diversity and thus took responsibility to protect the country's rich flora and fauna, to ensure sustainable use of biological resources, and provide a fair distribution of the benefits of this biodiversity.

Forests in Georgia are an especially valuable natural resource. Covering almost 40% of the country's area, forests play a vital role in the social, economic, and cultural development of the country. Forest groves are of paramount importance in maintaining the biodiversity of typical landscapes and ecosystems of Georgia. In addition, many sectors of Georgia's economy are directly linked to maintaining forest ecosystems. This includes the forestry sector, agriculture, hydropower, and tourism. It should also be noted that the ecosystem services provided by forests are vital to a significant portion of Georgia's population, such as timber and firewood, water, and non-timber products; and protection of soil from erosion, mudflows, and floods.

Forest management in Georgia has changed over the country's historical development and included traditional management approaches as well as steps taken by the state. In different periods of Georgian history there have been different ownership structures. Prior to the Soviet period, private owners, churches, villages, communities, and families all had the right to own forests in Georgia. After the establishment of the Soviet regime in 1921, forests were declared state property. In the same period a forest management system was established in Georgia. For example, in 1923, the State Forest Fund was divided into forests, quartets, and litters, which were run by managers. It should be noted that a similar system is still maintained more or less.

In 1978, the Forest Code of the Georgian SSR came into force, based on the Soviet Union's forest legislation developed in 1977. According to this code, the forests of Georgia were united in the state fund, which put forests in direct subordination of forest authorities, including former agricultural forest lands and Soviet farms, forest reserves. The State Department of Forestry of Georgia was directly responsible for managing all forests in Georgia. At a local level, The Forest Management Unit was responsible for administrative (security, permit documentation), and agricultural functions (timber manufacturing, restoration-renewal, etc.). The management of agricultural forests was organised by the collective farms, according to the provisions of the Agricultural Forest approved by the Council of Ministers of the USSR, in which they assisted the state forestry agencies.

It is noteworthy that according to the Code of 1978, in **SSR Georgia forests and agricultural forests mostly had diligent, protective, sanitary, hygienic, and recreational functions. Forest exploitation was extremely limited.**

Significant changes in the forestry sector begin after Georgia's declaration of independence. Under the Decree of the Government of Georgia (1992), forests owned by state farms, private farms, and other agricultural enterprises were declared to be state property.

In 1995 the Georgian Parliament adopted amendments to the Forest Code of Georgia (1978 edition) on the basis of which all forests, including state forests and forest in reserves were declared as state property and entered into the Unified State Fund. The State Department of Forestry of Georgia cared for the forests of the United State Fund.

In 1999 a new Forest Code was adopted, which replaced the Forest Code of 1978 and regulated the legal relations related to the maintenance, protection, restoration, and use of the Georgian Forest Fund and its resources. The code declared that the principles of the protection and sustainable management of forests are based on the country's constitution, including the declaration on "Principles of Sustainable Forest Development" (adopted at the Earth Summit in Rio de Janeiro in 1992), the Law on Environmental Protection (1996), and the principles laid down in Article 5. The latter includes biodiversity conservation, risk reduction and prevention, sustainability, and other important principles.

According to the above laws, one of the aims of the Georgian Forest Protection Fund is to preserve virgin forests, as well as endemic, relict and other precious species of plants.

The code redefined the definition of State Forest Fund territories. According to the new concept, the lands and resources were united in the state forest fund on the basis of legislation. The issue of the forest fund's ownership rights was interesting: for the

first time in the post-socialist period forests could be privatized, a process that was to be regulated by legislation, necessitating the writing of Code 9 of Article 2.

In terms of the institutional management of the forest fund, two large categories are recognised:

A. Areas that belong to this category of forest are within the protected areas and cover the territories defined by the Law of Georgia on the "System of Protected Areas". This part of the forest fund is 600,000 hectares and is managed by the State Department of Protected Areas of Georgia.

B. The second and major part is the state forest husbandry fund. It should be noted that 850,000 hectares of forest husbandries are located in different types of protected forests.

Production of timber, forestry products, and wooden secondary materials within the territory of the State Forest Fund was carried out only on the basis of relevant permit documents (license, contract or ticket), which were issued by the State Department of Forestry of Georgia based on forest inventory data. Forest categorisation data were also updated. At the same time, the timber production limit has been set from 30° to 35° in terms of slope inclination. As a result, forest husbandry areas have increased significantly.

Since the 2003 Rose Revolution, the structure of the executive branch has changed significantly. The Cabinet of Ministers was formed and the number of state agencies significantly reduced. The State Department of Forestry was abolished and its functions were subordinated to a sub-department of the Ministry of Environment and Natural Resources Protection. The Environmental Inspection Agency became responsible for environmental control (including forest fund territories).

Between 2004-2012, many legislative or institutional changes were made which had a significant impact on processes within the forestry sector.

The "Forest Reform" process began in 2007, with one of the primary tasks being to reduce the role of the state in the forest management process and to transfer forest management processes to the private sector. The structure of the Forestry Department changed, the central office reduced, and the official name changed to the "Forestry Department". The reorganisation of territorial bodies occurred simultaneously. Forest husbandries were abolished and 10 Regional Forestry Divisions were created instead,

Within the same reform, the state was exempted from the obligation of forest management and related expenses, only controlling the process of selling licenses. The bulk of the forests should have been issued with long-term licenses, the maximum term of which was increased from 20 up to 50 years [The Forest Code of Georgia (1999) permits short-term (one year) and long-term (20 years) forest use]. By the end of 2012, the process was quite intense, and the number of licenses for timber production (for 5, 10, and 20 years) amounted to almost 70, while the licensed area covered 161 671 hectares. It should be noted here that after the 2012 elections this process was suspended.

Starting in 2008, the task of issuing licenses for forest use was transferred to the Ministry of Economic Development and the Ministry of Environmental Protection and Natural Resources in the competence of the so-called "quotas" of the number of natural resources defined by licenses.

In 2010, in place of the Forest Department, the National Forestry Agency (LEPL) was created.

On July 6, 2010, the Parliament of Georgia adopted the Law on Amendments and Additions to Forest Code of Georgia (#3346) which was the most significant and large-scale change in the forest sector. Significant forestry management issues were changed.

The rules for conducting of the cadaster of the state forest fund and forest management were abolished, forest fund registration system and definition of improvement felling changed, a special protection mode was abolished for certain categories of the forest fund (resort and green areas, riparian forests and subalpine stripe of forest), etc. Based on the above law, all by-laws active at the moment of the adoption of the law were annulled and new by-laws were adopted, such as Rule of Establishing of the State Forest Fund, Border, Rule of Forest Recording, Planning and Monitoring, Rule of Forest Use, Rule of Forest Care and Restoration, as well as Order of the Minister of Environment and Natural Resources Protection on Rule of Issuance of Documents Verifying Eligibility and Origin of Timber.

Important amendments were made to the Forest Code . Specifically, a definition of “improvement felling” (implementation of measures in order to provide population, budgetary organizations, legal entities under public law (including legal entities under public law recognized by the Constitutional Agreement of Georgia) and other persons determined by the Government of Georgia with the forest products for non-commercial purposes in the cases provided for by the legislation of Georgia) was introduced. General requirements for round timber (log) movement and initial treatment were developed, wood labeling (recording logs using a special furnish) and entering into a common database became the official requirement by the law. Maximum terms for long-term forest use were increased from 20 years to 49 years.

Based on the requirement of the Law of Georgia on State Property, Resolution #299 On Establishing the Borders of State Forest Fund was adopted by the Government of Georgia in 2011. Based on the resolution, forest fund borders and identification data of forest fund land plots were established. However, it should also be mentioned that the borders of the forests formerly in the ownership of collective farms (“kolkhozs”) and Soviet husbandries remained undefined. Due to this, start of the process of privatization of former collective farms and Soviet husbandries envisioned by the Law of Georgia on State Property is pending. Besides, it should be mentioned that the forest management unit of the “forest fund” envisioned by Resolution #299 includes the local forest fund as well. This creates additional problems in terms of forest governance on the municipality level.

It should also be mentioned that in 2011, MoENRP underwent substantial reorganization. A significant part of the Ministry competencies became the competencies of the Ministry of Energy, while the Ministry itself changed its name and is now called “Ministry of Environment”. In the same year, Forestry Agency was subordinated first to the Ministry of Energy and then the Agency of LEPL Natural Resources Agency has undertaken under its sphere of competence natural resources (fossils, water, animal products, hunting, fishing), forest, establishment of non-timber resources license quotes, checking license conditions, prevention of illegal use, regulation of use of resources for personal purposes as well as the function of selling the right to use natural resources, etc. The State Forest Fund within the Area of Abkhazia and Adjara AR were governed by relevant bodies of Abkhazia and Adjara AR. In 2009-2012, the Parliament of Georgia and the Government of Georgia have adopted more than 200 subordinate acts in the forestry sector.

After the transfer of governmental power in 2012, the process has been contradictory. The Ministry of Environment Protection returned to the management of natural resources and was called the "Ministry of Environment and Natural Resources Protection of Georgia". The important environmental functions of the Ministry of Energy, such as management of the Forest Fund, environmental surveillance, and issuing licenses for natural resources, returned to the Ministry of Environment.

It should be noted that the undeveloped and often chaotic changes in the forest sector between 2003-2013 have significantly complicated the legal framework regulating forestry sector. At the same time, the institutional structure has remained almost

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the same, despite permanent reforms, it is largely based on the Soviet system. All of this negatively influenced the condition of Georgian forests and brought the issue of new legislation to the agenda.

In 2013-2015, with the participation of all stakeholders, a strategic document determining national policy related to the forestry sector was adopted by the Parliament of Georgia in 2013 as the "National Forest Concept". Additionally, in 2014 the government of Georgia adopted the "Biodiversity Strategy and Action Plan of Georgia,"² which includes 2014-2020, with other issues including problems related to forestry and other neighbouring sectors, specific tasks, and indicators to solve them.

The obligation to create a new forestry code is envisaged by the Association Agreement between Georgia and the European Union. The Ministry of Environment and Natural Resources Protection is responsible for preparing the document and the project is financed by the World Bank, the ENPI-FLEG-II project and the Austrian Development Agency (ADA). The new forestry code and the entire legislative base should be based on the National Forest Concept approved by Parliament in 2013, which defines the main direction of development in the country's forestry sector.

The new forestry code was launched in 2014. Foreign consultants were involved in the project and assisted in drafting the law. Local and international organisations, along with others interested in this issue, shared their remarks after considering the document. An improved version of the document was created under the auspices of the Ministry of Environment and Natural Resources Protection. Georgian experts were involved in preparing a new draft, and the code relied on the principles laid down in the National Forestry Concept prepared by the Parliament in 2013. A general discussion of the draft version of the new code was conducted in all municipalities of Georgia under the auspices of Forest Policy Department (MoENRP) in cooperation with CENN. In addition, internal and inter-agency discussions were conducted by the ministries. Unfortunately, due to the deadline for the 7th convocation parliament, parliamentary debates could not be passed in 2016, and the draft law will be approved after the October 2016 elections, after which the parliament of Georgia will adopt the 9th parliament

Management and financing of the forestry sector

The Forestry Policy Service

Forestry Policy Service was established in the Ministry of Environment and Natural Resources Protection to facilitate the development and implementation of state policy in the field of forestry sector regulation and forest management. The main functions and objectives of the service are:

- Participation in the development of state policy in forest management and promoting its implementation;
- Development of forest strategy;
- Preparation of proposals for promotion of strategic plan implementation;
- Preparation of proposals for implementation of state reforms in forestry field;
- Development of special programs for the sustainable development of the forestry sector and strengthening the capacity of the structures responsible for forest management;
- Presentation of forest management and forest use plans to the Minister;
- Discussion of proposals on changing forest status and participation in the decision making process;
- Development of relevant recommendations based on forest monitoring results;
- Implementation of other powers established by the Ministry in the field of forest management

The National Forestry Agency

In 2010, the state forestry department instead set up a legal entity — the forestry agency — which was authorised to carry out certain economic activities. The name was later changed to "National Forestry Agency." The main objectives of the forestry agency are the following:

- Elaboration and implementation of state policy regarding forest fund protection, forest regeneration and forest resources usage;
- Forest protection from illegal cuttings, forest fires, pests and diseases;
- Elaborating measures to protect and improve quality of forests of soil protectant, water regulating, climate regulating, sanitary, recreational and other functions;
- Providing system for accounting of forest resources;
- Supervision and monitoring of the state programs and other activities allowed on the forest fund territories;
- Participation in the international processes regarding sustainable management of forest resources;
- Cooperation with local and international experts and NGOs.

The State Forest Fund on the territories of the Autonomous Republics of Abkhazia and Adjara is governed by the relevant bodies of the Autonomous Republics of Abkhazia and Adjara. The Adjara forestry agency has been created for the management of forestry on the administrative territory of the Autonomous Republic of Adjara.

The Forest Fund of Georgia consists of forests with 93.8% of the total area and "Forest Fund Land" (total volume 6.2%) which is distributed as follows:

- Agricultural farms: -2.4%

- Forest lands: 1.0%
- Special purpose land: 0.3%
- Unused lands: 2.5%

According to the National Forestry Agency, 97.5% of forests come from natural forests, and artificial forests make up 2.5%.

In terms of institutional management, the forest fund is mainly divided into two parts. There is a state agricultural forest fund comprising 2,694,700 hectares and a forest fund transferred to protected areas with a capacity of 312,900 hectares.

The Forest Code is governed by the type of management - "**Assigning**", which means a portion of forest and forest land management, a certain period (maximum of 20 years), and conditions for any institution. Issues of, assignments" are regulated by Government N242 resolution "On the Use of Forest" and may be carried out for two purposes:

- Providing state security and defence;
- Maintaining natural conditions within an area of up to 20 hectares of the natural boundaries near monastery complexes and creating calm environmental conditions for pilgrims.

The State Forest Fund shall set up the respective zone of the State Forest Fund and determine its authority to the Government of Georgia, while the Ministry of Internal Affairs and Defence of Georgia shall have the right to issue the matter to the Georgian Patriarchate. These territories may only be used for the implementation of forest restoration and care activities (supervised by the management body). In addition, these territories may restrict or completely prohibit forest use by citizens if it is incompatible with the purpose of the precinct's allocation. Nowadays, 65 territories are allocated by assigned method, the absolute majority of which are dedicated to the Georgian Patriarchate.¹

Forest Use Rule "allocates another category of the Forest Fund –"**Special Functional Destination District**" (SFDD), which is divided into several sub-categories. Among these categories are groups that are of particular importance in environmental and recreational terms, such as:

- Green zone and resort zone areas;
- Flood forests;
- Different types of protected forest stripes;
- Area of 300 m wide forest area (subalpine forests) adjacent to alpine zone;
- Forests covering up to 100 hectares of land between unspecified spaces;
- 200 m wide forest stripes along the permanent stretches of snowballs and mudflows;
- Forest areas located on slopes of more than 35°;
- 100 m wide forest stripes around places of flats, landscapes, karstic creations, land mines;
- 300 m width forest areas in banks along the rivers, lakes, reservoirs and water channels;
- Forest areas located in the 1 km radius around leisure houses, boarding houses, medical facilities, and mineral sources.

It should be noted that social cuts are prohibited by the SFDD under the management of the National Forestry Agency, although permits are allowed for so called "regular cuts". The main purpose of SFDD (other than in the protected landscape of Tusheti) is its importance for autonomous and local self-government. Additionally, resort, recreational, sports, and other cultural-recreational activities in SFDD are permitted only for the purpose of arranging buildings and without the use of timber.

The Agency for the Protection of the State Forest Fund, which is within the protected areas of Georgia (capacity 312,900 ha), is the Agency of Protected Areas within the system of the Ministry of Environment and Natural Resources Protection. This agency acts in accordance with the requirements of the law on "**Protected Territories System**" and manages the forest under its control (including the forests of protected areas within the Autonomous Republics) according to the category of protection, in accordance with the requirements of the Law and Managing Plan for the creation of a specific protected area.

Supervision and Execution Function

The function of the Environmental Supervision Department is the enforcement of environmental legislation: detection and prevention of illegal use of natural resources, control over the fulfilment of conditions, and the issuing of permits in the field of environment protection.

Economic tasks

The forestry sector

For the Georgian population the forest has a huge social and cultural role. The forest resources of the rural population are of great importance as well. Nevertheless, the total value of the products created by the forest sector is only 86.6 GEL million (Geostat data), which is only 0.3% of the gross domestic product. This condition is caused by many reasons. First of all, it should be noted that in the last 12 years there was a significant increase in Georgia's GDP, while the additional value added by Georgia's forest sector did not increase, but rather decreased. It is noteworthy that the share of the forest sector in the last 15 years reached its maximum indicator in the GDP in 2006 and reached 1.26%, which was even smaller than the Georgian economy.

Interestingly, according to the data of 2015, only 961 people (108 women) are engaged in the forestry sector, which is a small figure given the fact that 40% of Georgian territory is covered by forest.

According to data from the National Forest Agency, the extraction of wood resources in 2015 amounted to 616,200 meters, from which the largest part – 515,000 metric tubes-- comes into social cuts. In fact, most of the cuts produced in Georgia go towards the satisfaction of the social needs of the population.

The importance of timber exports in Georgia's export balance is negligible. According to the Geostat data, the amount of handled exported products from Georgia in 2015 amounted to \$11 million, while the maximum indicator comes in 2007 when export volume exceeded \$20 million.

According to the Law of Georgia "On the State Budget of 2015," by 2015 the State Budget of the National Forest Agency was 10,455,000 Gel. Out of this, the cost of the apparatus was 8,630,000 Gel, while forestry implementers spent 1,825,000 GEL.

In addition to budgetary funds, non-budgetary revenues received by the National Forest Agency (as of December 15, 2015) amounted to 5,709,400 GEL, including:

- Service fees (from issuing timber manufacturing tickets, etc.) - 1.802,300 GEL;
- Forest use agreements (on the territory of forest fund for placement of communication towers) - 2,543,700 GEL;
- Sales of the timber origin documents and the sale of special banners - 41,200 GEL;
- Sales of timber resource - 837,100 GEL
- Compensation fees for use of special purpose by forest fund - 235,100 GEL;
- 155,600 GEL from the bank interest;
- Other- 94,400 GEL.

The amount of expenses incurred from their own revenues amounted to 3,958,600 GEL.

In addition to these funds, the National Forestry Agency has received grants of 167,200 GEL with the assistance of various international donors in 2015, which has been entirely spent on the implementation of forest-maintenance restoration measures.

Tourism

Tourism is one of the fastest growing sectors in Georgia and plays a major role in the economy of the country. Tourism plays a significant role in maintaining Georgia's balance sheet, as 61.4% of the country's export revenue comes from tourism and its volume in 2015 exceeded 1.94 billion USD.

The number of international travellers increases annually, and the total number from 2015 is 5,901,094¹. The share of tourism in Georgia's gross domestic product is 6.7%, and the total added value reached 1.84 billion, which is 258 million more than in 2014 (growth + 16.2%). The number of sites operating in the sector is 1,475, while the number of work associated with tourism is 158,515.

Internal tourism increased too. According to the National Tourism Administration, around 12.4 million visits were made in 2015 and the expenditures exceeded 1.53 billion. The main spheres were business tourism, active, and eco-tourism. It should be noted that in terms of domestic tourism, most visits (excluding those within Tbilisi) are implemented in Imereti and Adjara. Fewer visitors and visits are registered in the Racha-Lechkhumi and Kvemo Svaneti regions.

The increase in tourism activity has contributed to the promotion of tourism through numerous events and projects in recent years. Rehabilitation / reconstruction of tourist places has been carried out, along with the construction and rehabilitation of tourism infrastructure needed to develop new tourist destinations.

It is very promising that projections in the field of tourism are expected to increase the number of international and domestic income, the number of employees working in the tourism sector, and the revenues from this sphere. It should be noted that tourism development contributes to the growth of many sectors related to it, including agricultural production, trade, transport services, and various tourism services.

The main function of the forest, as it was already noted, is the protection of the population and its socio-cultural functions (recreation and tourism). In addition, high public interest in forests is associated with forests with a protective function, such as preventing or minimising threats to population or infrastructure from natural disasters (landslides, avalanches, etc.). In terms of the public interest, it's extremely important to preserve the water regulation, micro-climatic preservation, and biodiversity protection functions of forests.

The socio-economic functions of forests associated with the highest public interest can be divided into several categories:

Protection and conservation can be defined by the criteria of the Ministerial Conference on the Protection of Forests in Europe as well as by the Forest Stewardship Council's (HCV recourse network) definitions.

Forests in these categories are characterised by the diversity of species. This includes endemic, rare, and endangered species along with species of global, regional, and national importance, while taking into account the concentration of endangered species. First of all, this group belongs to forests in the jurisdiction of protected areas and forests of critical importance for basic ecosystem services (water retaining arrangements, erosion deprivation, landslides, mudflows, and spas forests). This category also includes areas that are of great importance for biodiversity and all internationally recognised sites (such as NATURA 2000 or Emerald Network sites, important places for birds, Ramsar sites, important vegetation sites whose boundaries are determined by international agreements in the frames of established principles and methodologies).

In the same category there are forests that have global, national, cultural, archaeological or historical importance, as well as special cultural, ecological, economic or religious / sacred significance for the traditional culture of local communities or indigenous populations.

The economic function is linked to the production of timber (firewood and timber). It is necessary to introduce sustainable management procedures for biological resources in the commercial use of forests. Agricultural forests are forest areas where sustainable use of forest resources can be based on the cuts identified in the management plans so as not to threaten the forest ecosystem and its socio-economic functions. Practically, this means that timber can be obtained by considering the growth rate of a forest and within the limits of its agricultural potential.

The recreational category reflects the socio-economic function of forests (welfare and recreation), as well as services provided by the forests to the public. The socio-economic functions of forests can be used for everyone and are free of charge. This is especially true for recreation and tourism, along with the production of food for domestic animals and humans.¹ The existing categories of forests and green zones are also commonly integrated into the category of socio-economic forests.

The forest can combine a protective or conservative function only if it is in its natural condition, because sustainability is characterised by the forest within its existing environmental-ecological conditions. Forest health is the basis for many other functions of the environment. Although forests are often damaged by various negative factors such as climate change, forest pests, droughts and forest fires; healthy, viable and suitably protected forests have the highest resistance rate. At the same time, the forest has an important impact on the environment.

Development of Tourism in Forestry Sector

The existence of healthy and intact forests is important for tourism development, which, in turn, should promote the development of the forestry sector.

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Water resources protection

With the formation of leaves, wooden crust and tree-plant derivatives, forests significantly reduce the water dispersion rate and facilitate slow but full infiltration of rain water. The presence of forests in dry areas is particularly important in maintaining the water cycle, which involves the gradual allocation of the tube in the atmosphere during fog and other similar events, and the accumulation of soil surface.

Soil protection

Forest fire slows down the wind speed, and at the same time, its roots anchor the soil and protect it from water erosion, landslide, cold climate, and avalanches. With the help of aslow water dispersion, the forest protects the soil and the river banks from rainfall and erosion.

Forest influence on local climate and gas emissions reduction

At the expense of wind speed and air flow controls, the forest is influenced by local circulation of air that helps reduce volatile elements (especially water evaporation). In addition, the forest is filtered by air masses and enriches it with oxygen and other substances that are important for maintaining the life cycle. All this also plays a crucial role in the savage settlements and especially in the maintenance of normal habitats in cities.

It should be noted that Georgia has serious experience in this regard. Development of tourism in Georgia started on the eve of the 19th and 20th centuries and increased significantly scale beginning in the second half of the 20th century. During this period, the well-arranged tourist bases and hotels in Tbilisi, Sokhumi, Batumi, Kutaisi, Vardzia and other places were established.

In the 1980s, 624 hotels, tourist bases, and similar establishment were registered in Georgia. However, despite the fact that Georgia's resorts were a brand within the Soviet market, a significant part of the tourism traffic came from ecotourism.

The warm and attractive climate, rich traditions of hospitality, interesting tourist routes, historical monuments of early and medieval times, beautiful nature, and balneological resorts - made it attractive for tourists from various republics of the Soviet Union.

In 1978, during the Soviet era, the main purpose of the Forest Code was to improve forest protection and sanitation and hygiene status. This indicates that in the Soviet period the primary use of Georgian forests was recreational and protective in function.

Due to the collapse of the Soviet Union and subsequent developments, Georgia was in serious crisis. There was a violation of the existing system, which (along with other sectors) was dependent on both forestry and tourism. In the early 1990s, conflicts developed in the country significantly reduced the tourist sector, and the energy crisis seriously damaged the country's forests.

The intensive revival of the tourism sector began after the Rose Revolution in 2003. Development of both international and domestic tourism has become one of the main priorities of the Georgian government. It has been implemented and continues to be implemented in the development of 4-season resorts. As a result, instantaneously the number of tourists started to increase. Between 2010-2012, the increase in the number of tourists in the country reached 35% annually. This figure has been growing in recent years, as the number of tourists arriving in Georgia in 2015 has reached almost 6 million.

Georgia has great potential for development of all types of tourism, including ecological tourism. This is especially important for the forest sector because, as it was mentioned above, 40% of the Georgian territory is covered by forests. The bulk of Georgian forests belong to the category of natural forests, which is especially important in terms of tourism development. Almost 97% of the forests of Europe are found, cut and manually cultivated by humans, or in some cases tertiary forests. The value of such forests is very low in terms of biodiversity or conservation and remain only a recreational feature. It should be noted that the use of ecological tourism's potential is extremely important for the socio-economic development of the country and is one of the most important prerequisites for improving the economic situation of the Georgian population (including the population of urban areas).

The natural and diverse forests of Georgia, aesthetically attractive landscapes, unique flora and fauna, endemic species, the existence of protected areas networks - make ecotourists more attracted to the country as a high-budget destination (for tourists who spend more than \$ 1000 and more during their visit), as well as a relatively cheap sector of tourism development. Georgian cuisine, folklore, local culture, and the traditional hospitality of the population represent additional factors that significantly increase the possibility of using this potential.

Tendencies in the Developed Countries

The use of forest resources in Europe was always related to timber consumption. This trend is still observed. This is due to the fact that, as a result of the artificial cultivation and intensive cutting of forests, almost 97% of forests in some European countries

are artificial. These areas are mainly dominated by several species (pine, spruce and fir-tree), which have a maximum solution and commercial value. It is obvious that the value of such forests is very low in the sense of biodiversity and therefore ecosystem sustainability. From a recreational point of view, such forests are less attractive.

From the beginning of the 21st century, the situation in European countries has changed radically. The forest has acquired a recreational and tourist function separate from lumber extraction, due to local populations' interest in natural landscapes. Tourists are particularly interested in natural forests, which are rare in most European countries and have increasingly decreased throughout the world. For example, in the last 25 years, the area of natural forests has declined globally by 240 million ha, and the number of artificially grown forests increased by 278 million hectares.

Significant changes are occurring in the agricultural sector as a result of the globalisation process. Thanks to the increased rate of urbanisation, for the first time the population living in urban areas significantly exceeds the rural population. As a result, the World Trade Organisation's (WTO) latest 10 year history, one of Europe's fastest growing tourist sectors is nature tourism and ecotourism. These two types of tourism are related to each other and both attract interest to the natural area away from the city.

In urbanised Europe, forests surrounding major cities create an aesthetically pleasant and generally healthy environment that helps the population to carry out recreational activity. Different types of forests allow town residents to stay close to nature, relax, and experience positive emotions. Additionally, contact with forests and nature helps children to become closer to nature and study it. In other words, the existence of recreational forests at the local level contributes to the creation of a high quality residential and work environment, improvement in the health of the population, and positively affects the economy.

This realisation significantly changed the priorities of the European forest sector. Ultimately, in many European countries, instead of the extraction and processing of forests, there was a possibility new and different sources of revenue that led to the forest's recreational

Identification of forest recreations and benefits of ecotourism

The value of forest recreations can be different in numbers. There are two main ways of determining the cost of recreational value (M. Merlo and L. Croitoru Valuing Mediterranean Forests: Towards Total Economic Value, CABI International, Wallingford UK / Cambridge MA (2005).

The first types of natural resources are evaluated according to their demand curve. According to this approach, income is indirectly linked to services offered and of course the price of wooden materials and parcels.

- The second approach uses traditional methods of production for forestry, such as cost analysis, analysis of forest care and maintenance costs, determination of profit earned from sales projection, etc.

Both methodologies do not determine forest recreational value and tourist requirements. However, in the absence of basic data on revenue derived from recombination benefits, this methodology gives us an opportunity to indirectly assess the prospects of revenue from the tourism sector. This is carried out by the analysis of revenues and revenues or losses of various commercial units (restaurants, hotels, jobs, products and others in the field of tourism), such as the cost of amenities, or losses for which the forest industry has not received any valuable resources (Because).

function. As a result, restructuring and tourism became an important part of many forestry activities.

Forest aesthetics and recreational features enable the development of tourism and related economic sectors. Recreational opportunities and fascinating landscapes create tourism attractions in the area adjacent to regions covered by forest, as well as near the city. Maintaining forest on such territories or improving its visual side can become an important method for forest management. This implies the creation of the so-called natural tourism environment, which is mostly measured by landscape, which is a major priority in choosing a tourist destination.

Nevertheless, the study of the forest recreational function and the revenue generation from this field at a scientific level has just begun. The social value of forest recreations is an intangible benefit such as aesthetic value and psychological-physical health improvement (Tyrväinen, et al., 2005).

Landscape Preference Surveys (RIBE 1989; Tyrvaiven et al., 2006; Bell and Apostol 2008) show that traditional forest management replacement with regenerative and recreational practice has great influence on the "value" of the landscape. This means that in order to create a recreational environment, the management of forest resources should be in accord with the expectations of people while promoting the introduction of better methods for forestry management.

One of the primary challenges in the development of nature and ecotourism is developing a market mechanism that will benefit the forest fund and allow the beneficiaries to receive revenues from the tourism sector. Very likely, this is exactly the mechanism that will support sustainable ecotourism development.

Contemporary Studies (Wollenberg E. 2000)¹ also clearly demonstrated the existing connections between the conservation of biodiversity and forest resources. It was found when the local population depends on forest biodiversity (for example, non-timber forest resource extraction, processing and sale, so that the local population will receive economic benefits), it increases the motivation to protect local nature from any actions that may harm their activities.

Due to all of the above mentioned, the loading of rural and forest zones is changing and is now oriented not only for the production of firewood but also for recreational and tourism services. As a result, there is a situation in which urban daily life and rural life are close to each other, are experiencing integration, and creating new alternative sources of income.

Forests give mankind a lot of economic and social benefits. Among them are forests' contribution in the economy, such as employment, forest resources, energy processing, trade, and investment in forestry. Examples of benefits include the protection of monuments and sights with high cultural, religious, or recreational value. Maintaining and strengthening similar functions is an essential part of the management of forestry. Information on socio-economic benefit status and trends is important in evaluating the progress of sustainable forestry. The economic benefit of forests is mainly determined by monetary categories and includes sector revenues, forest resources and earnings from enterprises, sectors in the national economy, energy stock, and share in international trade.

It is also noteworthy that the sector's economic stability can be measured with data, such as forestry enterprise profitability, or investment value. The social function of forests is often more difficult to measure and varies according to the country's level of development and traditions. For example, in developed, post-industrial societies the recreation function of forests are often the most important, while in developing countries, the social function of forests relates to the amount of areas that can be used for agricultural purposes or to the amount of people working in the forestry industry.

The social function of the forest, considering the difficulties associated with measuring social benefits, is determined not based on the results, but rather on the basis of payment (for example, the area of forest land for various social functions or proportions).

The international processes of criteria and indicators always contain socio-economic functions or usage definitions and monitor a section of the forest sector. It is possible to measure a large variety of variables - production and consumption; recreation and tourism; investment in the forestry sector; cultural, social, and religious needs and values; employment in the forest sector; health and safety; and public requirements.

Forest Husbandries

Worldwide forest husbandries account for about 1.2 billion hectares of land, of which half of are in developed countries. The remainder is distributed to middle income countries, while the share of small income countries is relatively minor and does not exceed 8% (13 million ha). Forests with multilateral use of timber production have been globally circulated to over 1 billion hectares, two of which come from countries with large incomes. It is noteworthy that in the past 10 years the forests within this critirium have decreased by 38 million hectares.

In 2011, the volume of timber extraction worldwide reached 3 billion cubic meters, which constitutes 0.6% of global forests (so-called forests). This figure is characterised by a decrease in trend, for example in the preparation of the "Forest Resource Assessment" report in 2010 (FRA 2010), the amount of unprocessed woods that was collected in the data amounted to 3.4 billion cubic meters, which was 0,7% of the global forests. The reduction in 5 years was 0.4 billion m3. This trend is especially prominent in Europe and North America, where in 2005 forest timber was 1.3 billion cubic meters, and by 2011 it was reduced to 1 billion cubic meters.

It should also be noted that FRA data from 2015 estimates that half of the globally obtained timber is used for heating, an area where there are significant differences among rich and poor countries. If 86-93% of pulses produced in poor countries are used for fuel, this indicator is 40% in countries with an average income, while in rich countries it does not exceed 17% (Fig.1).

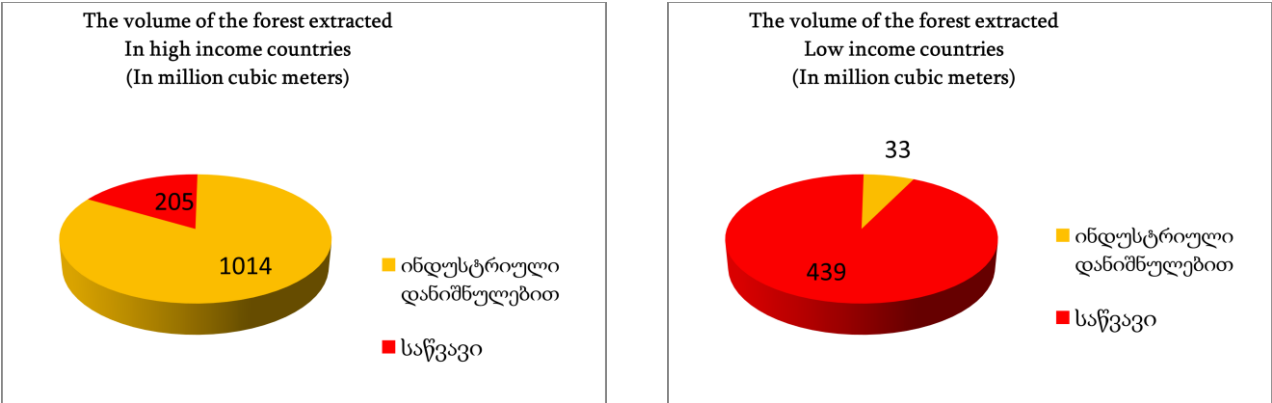


Fig. 1

Industrial purpose



Fuel



Studies conducted by FAO indicate that the world's forest sector generates more than \$600 billion per year. This figure includes sectors such as furniture and paper manufacturing, building materials, and other products related to timber processing. According to data from "FRA 2015", which is based on reports from 148 countries, the volume of timber production is estimated to be 117 billion US dollars, from which 41% are still in developed countries, while the poorest countries do not exceed 5%.

In the 1990s, as a result of excessive production, the global market had a sharp decline in the price of lumber. Since 2000, the price has continued to increase and the price of logs on the world market increased by 11% in the last 15 years. However, if we consider the inflation rate during the same period, the real value is still lower at the global level, which is negatively influencing the sector's profitability. The situation has worsened since the beginning of 2010, when the prices became stagnant and since the end of 2014 began to decline now approaching the historic minimum of 1986, at 83 euros per cubic metre. In part, this fact can be explained by a change in the structure of wood materials that is due to the high value of wood in the natural forests in comparison with the relatively low payoffs of extracting the wood from the plantations.

The share of the timber industry in the gross domestic product is different. For rich and middle-income countries, the share of timber harvesting (unprocessed logs and firewood) is very small and makes up 0.1%, which is explained by high levels of development in other sectors. The share of forest extraction in the poorest economies is much bigger, which is explained by the emphasis on obtaining natural resources and the development of the economy.

It is noteworthy that Georgia has an intermediate position in this regard, and, as noted above, the volume of the forest sector is 0.9% of GDP, which is also characteristic for developing and transition economies. FAO forecasts that, with the growth of similar economies, Georgia is expected to further reduce the interest rate of the forest sector in the GDP, which is usually explained by the reduction of dependence on firewood. However, it should be noted that according to the forecasts of the same organisation, the importance of forest and forest products will be maintained in the regions, along with the reduction of the role of forest sector at a national level.

At the end of the analysis of the expenses incurred in the forest sector, one circumstance should be noted. According to the "Forest Resource Assessment" 2015 report, the costs incurred by the state exceeds the proceeds of most of the countries receiving taxes or other forms of the budget. For example, the amount of money from the forest sector in the budget of European countries will be \$4.5 per hectare, while the revenues spent from the budget are \$6, while the average global rate is \$7.5.

Finally, it should be noted that there is a tendency to increase the area occupied by the forests of defensive forests throughout the world. Forests for the protection of water and soil during the last 10 years are growing annually by 3.1 million hectares, which in total amounted to 59 million hectares since 2000. Additionally, forested areas are protected for the conservation of biodiversity, which constitutes 6.3 million hectares a year over the last 10 years (FRA 2010).

According to the same survey data, the trend of growth in forested areas with all types of social services is also observed elsewhere in the world. For example, in the 1990s, the volume of forests with social functions was 3.7% of all forests, and by 2010 these areas increased to 30.9%.

In conclusion, we can say that there is a more or less stable situation in the forestry sector on the globe. The negative trend of rapid reduction of forest cover areas more or less ended at the turn of the 20th century. However, the pace of loss is still unacceptable, at 0.13% per year. Another difficult situation occurs in terms of income earned in the forest sector: a result of low

prices in the international timber market. In accordance with the situation in the forest sector, it is necessary to find alternative income mechanisms.

Development of Tourism in Protected Areas

The tourism and service sector is a complex industry and constitutes one of the most important grounds for sustainable economic growth in the country. Due to the geographical location, relief and climatic conditions of Georgia, there is a great potential for tourism development. The different forms of tourism are due to the diversity of natural conditions in the country. Among them natural tourism and ecotourism have a special significance and are an integral part of the tourism development strategy.

Within the past 10 years, Georgia has shown significant outcomes in the area of recreational management of forests through the protection of national forests. In addition, approximately 75% of protected areas are covered by forest and forest management is an important for the agency. This practice can be successfully transferred to the management of the Georgian Forest Fund, which should facilitate the effective management of the forest of Georgia as well as economic functions and socio-economic development at the local level and contribute to an increase of the income of the population. . Therefore, the National Forest Agency may share the experience of the Agency of Protected Areas for the development of the recreational direction. By focusing on the recreational value of the forest rather than harvesting timber, Georgia can become one of the most attractive tourist destinations in the region.

Protected areas in the development of ecological and natural tourism have a number of advantages:

- Aesthetically attracting tourist sites that offer visitors the opportunity to visit interesting and fascinating natural landscapes;
- Having a well-developed system of tourist group services and tourist routes;
- Having a specific infrastructure and trained personnel;
- Having both legal and factual mechanisms (services available on the sites), which control all activities in nature and are protecting it from negative impacts.

The promotion of tourism development started with the formation of national parks in the protected areas of Georgia and has a continuous development trend. The process was especially helpful in establishing the Tusheti and Vashlovani national parks in 2003 and in the expansion of the Lagodekhi Protected Areas. It was critical to the formation of Borjomi-Kharagauli, Kolkheti and Javakheti National Parks and start the process of development of natural monuments.

The development of tourism in protected areas has been particularly intensive in recent years. Both foreign and local tourists continue to participate in this process.

The main objective of the Protected Areas is the conservation of biodiversity, but the richness of landscapes and cultural monuments gives the opportunity to develop tourism. Developing natural and eco-tourism as well as the development of services for tourists is a serious source of income for residents of the regions.

The Tusheti Protected Territories, whose establishment and development started in 2003, is a good example of this. It should be noted that this unique area on the Greater Caucasus is quite isolated due to lack of infrastructure for both residents and tourists. The road leading to the mountainous terrain, which passes over 3,000 meters above the sea level, is locked down from autumn to late spring due to weather and winter avalanches, resulting in Tusheti being cut off for six months of the year. Even when the

road was cleared, the local population needed at least ten hours to reach the administrative centre of Tusheti from Kvemo Alvani Village, Kakheti region. Due to the economic crisis in the aftermath of the disintegration and collapse of the Soviet Union, the local population was in extremely poor condition. This unique region of the mountains of Georgia was found on the edge of the vacuum, facing severe lack of social and medical services.

The situation has changed drastically since 2003 when the National Park was formed. With the help of international donors the necessary infrastructure for tourism development occurred. Routes were planned, facilitating small family hotels and other necessary infrastructure for tourists. Shops and fast food stores opened. Today, the number of private hotels in Omalo alone has reached tens of thousands, while the number of officially registered tourists has doubled over the last 10 years. It should be noted here that at the expense of the initiative started by the National Park, most family hotels are supplied by electricity using solar energy: a unique situation even in the global context.

It is important to take into consideration that the income of the local population significantly increased. According to the administration of Tusheti National Park, the amount spent by Tusheti in recent years has increased to one million eight. These funds mainly support the economic situation of the local population. At the same time, the support of the population living near the territories is of great importance in terms of the conservation measures as their incomes are directly related to the normal functioning of the protected areas. Therefore, the protection of the nature is amongst their interests.

The successful example of Tusheti was based on the establishment of the Pshav-Khevsureti Protected Area. The mentioned mountainous region is also in a serious economic crisis and is largely abandoned by the population. The establishment of the protected areas should support the development of Pshav-Khevsureti and improve the social condition of the local population.

Official statistics are quite interesting. According to the Ministry of Environment and Natural Resources, the number of visitors to the protected areas has increased by 100% in the last 3 years. This figure was very small 10 years ago, but since 2007 there has been an increase in the number of tourists and as of 2011, there were 300,000 visitors on the protected areas, 53,000 foreign citizens, including Israel, Germany, Poland, and other countries. This growth rate was maintained over the years, and exceeded 518,000 by 2015.

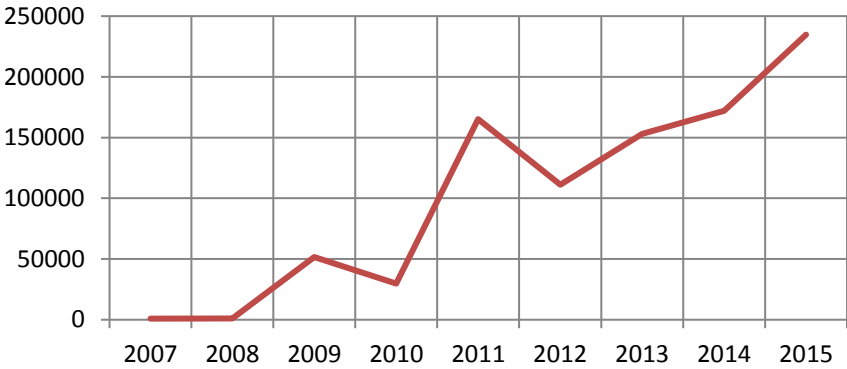


Fig 2. Change in the number of visitors in the Tusheti and Imereti Protected Areas.

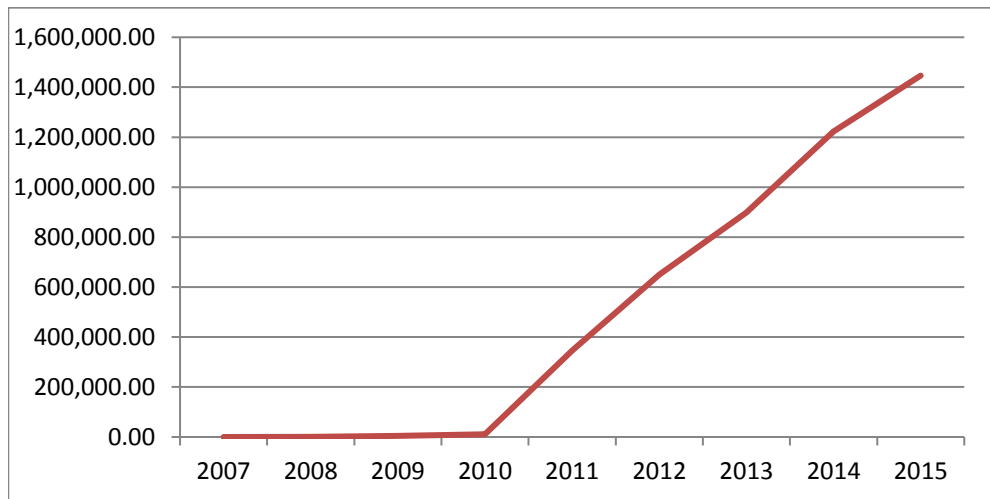


Fig 3. Incomes of Tusheti and Imereti Protected Areas in 2007-2015 (Incomes are given in GEL).

Sataplia complex (152,000 visitors) is considered to be the most attractive place among Georgian travellers, where the number of Georgian and foreign tourists is almost equal. For example, in the year 2015 there were almost 152,000 tourists, including 69,534 Georgian tourists, and slightly more than half of this figure, (82,415) foreign tourists. Due to the use of spare-paleontological tours in the Borjomi-Kharagauli, and Imereti Protected Areas, and the possibility of using mountains for mini-skiing, it is very important that the number of local tourists also increases in Georgia, which is at 247,000 according to the 2011 statistics, and, as of 2015 has increased to 336,889.

The development of Georgian Protected Areas is in the constant attention of international donors. For example, the assistance of the German government alone through the German Development and Reconstruction Bank has reached 80 million euros since 1995 for the implementation of environmental projects. Creating and strengthening the protected areas is one of the main priorities of the German government. Organizations that play a role in the development of protected areas include the World Environment Fund (GEF), the World Bank, the United States Agency for Development, and others.

The Caucasus Nature Fund (CNF) was founded for the financial support of the Agency for Protected Areas, co-financing administrative expenses for reserve forests or national parks. The fund has recently allocated 662,500 euros to the Agency for Protected Areas, which will be used for the various needs of Borjomi-Kharagauli, Pshav-Khevsureti and Mtirala National Parks. The fund also provides employees' insurance, along with activities aimed at improving management and functioning of territories.

The tourism infrastructure development projects of the Protected Areas are still underway, promoting local business development, family hotels, catering facilities and demand for shipping services. For example, in recent years, new tourist infrastructure has been implemented in Javakheti and Kazbegi National Park and Kintrishi Protected Areas for the development and expansion of the Protected Areas Network. The quantity of nature monuments and the services within them were expanded, amounting to a cost of 10,000,000 GEL for the Agency for Protected Areas, protected by international donors. Tourist services such as canyon tourism, animal tours, and more developed.

Development of tourism infrastructure, besides international assistance, is also directly supported by the protected areas. In 2016, the local visitor centre constructed the Centre for Protected Areas on Martvili Canyon Nature Monument, tourist lanes, and a navigator. 1,223,907 GEL was spent on infrastructural works. As a result, Martvili Canyon has received more than 40,000 visitors during the last 2 months. Considering the fact that a minimum of 5 GEL is charged for visitors, the return of spent investments is expected to take place in a relatively short period of time.

One of the main principles for the sustainable development of ecotourism is to ensure that the local population is involved.

For example, in the beginning of 2016, the renovated visitor centre and hotel complex opened in the Lagodekhi Protected Area. A hotel for 30 people has been leased for a 15 year term and local residents are employed. The Agency for Protected Areas has also handed over a service management license to Oputskhoi Ltd. for up to five years, along with up to 80 local families.

The Agency of Protected Areas implements social programs with the help of international donors and their revenues. For instance, the Kazbegi National Park competition was held within the framework of the program "Support for Protected Areas in the Caucasus - Georgia". Representatives of village communities in the Kazbegi municipality participated in the competition. The participants presented projects planned for rural development. The Regional Advisory Board has identified 20 winners of the social project. The winners were awarded with the amount of 205,000 GEL to implement the projects. The competition was funded by the German Development and Reconstruction Credit Bank (KFW) and with the support of Kazbegi National Park's Friends Association.

In Tusheti National Park, "Solar Moe", organised by the Agency of Protected Areas, the Czech Ambassador to Georgia, Thomas Pernitsky, handed over a Mitsubishi Pajero 2014 car to the Akhmeta municipality administration. And in order to improve the veterinary service for the Turtle Shepherds, a veterinary centre has been opened in Kvemo Alvani. A veterinary centre vet, as well as pharmaceutical and mobile veterinary service, are at this stage serving the pastures located on the Vashlovani National Park and will be operated by Kakheti Veterinary Regional Association.

The UNDP project Sustainable management of pastures in order to mitigate climate change in the local communities in Georgia and adaptation benefits and dividends, with the financial support of the European Union, has two pilot farms on the territory of the national park. In order to minimise damages caused by sheep, the water supply system was held and 2 irrigations were made. To improve pasture management, local community representatives acquired a small tractor to implement agrotechnical activities.

Under the project, Development and upscale of the management system in Adjara AR protected areas, employees of the Kintrishi Protected Areas have awarded an agricultural cooperative with nut clearing equipment worth 5,900 GEL. This equipment will help to increase seasonal harvests, decrease product cost, and increase revenue by 1 GEL per kilogram.

There is significant opportunity for increasing tourism revenue. Access to protected areas in Georgia is free, although in many countries it is widely supplemented by tax payments. In February the Kakheti Information Centre conducted a survey in Georgia that aimed to study the opinion of tourists about this issue in Georgia. According to the results obtained, 63% of the foreign visitors who are interviewed agree on the entrance fee in Tusheti. It should also be noted that the visitors were offered a minimum price of 10 USD and a maximum of 25 USD. The United States, Germany, the United Kingdom, Israel; Poland, France, the Czech Republic and other countries participated in this survey. The survey indicates the willingness of tourists to pay additional fees that will be used for recreational and conservation purposes.

It is important to note that tourism cannot develop without having an impact on the environment. It is impossible to concentrate on tourism development without considering ecology. The overwhelming number of visitors may result in serious damage to biodiversity and environmental degradation.

The most frequent points of conflict with the preservation of nature include picnics, which run the risk of fire along with environmental pollution. Sources include motor sports, alpine tourism, berry and fungi collecting, fishing, and bonfires. The most serious detrimental factor for local fauna is the noise generated by the movement of transport vehicles and people.

Conclusions and Recommendations

In recent years, despite traditional usage of forests (consuming timber and non-timber resources) the recreational and tourist function became very important. Recreational zones contribute to the creation of a high quality residential and work environment, improvement in the health of the population, while positively affecting the economy. The extraction of forest resources is replaced by policies directed towards forest maintenance, and the development of tourism and the service sector provides alternative revenue.

This is especially important for Georgia, since the reduction in prices on the international market, along with the increase in the value of forest extraction, significantly reduces revenues from forest derivatives in the forest sector. The resulting situation forces forest management units to find alternative sources of income, and tourism development is one of the most promising directions.

Georgia has good prospects in this regard. Natural and varied forests, aesthetically attractive landscapes, unique flora and fauna, rich cultural and historical heritage show a good foundation for both natural and ecotourism development.

The current situation affects the development of the Georgian forest sector, which is at an important stage of transformation.

- On the one hand, aggravated competition on the international market, the decline in the price of timber and reduction in revenues (resulting in the reduction of forests) hinders the development of business activity related to the acquisition of timber in Georgia.
- On the other hand, intensive extraction of timber is inadmissible, due to the mountainous terrain of Georgia; a significant part of Georgia's forests are on high slope slopes (30°-35° and more).
- An important part of Georgia's forests have defensive (protection of population and infrastructural facilities from natural disasters) and ecosystem delivery functions (water catchments, microclimate and biodiversity functions, etc.).
- International organisations claim that the Caucasus and Georgia are one of the most distinguished regions of biological diversity. This area is among the 35 biodiversity hotspots of the world. Between the biomes of the country is forests are extremely rich in terms of biodiversity in Georgia, with more than 400 species of trees and bushy plants, 61 of which are endemic. It is also recognised that the biodiversity of the region is under serious threat, with forest ecosystems particularly vulnerable. Consequently, a significant portion of forest habitats carry global conservation value, and their agricultural use is unacceptable.

Considering these factors, intensive use of Georgia's forest waste resources for commercial purposes is extremely limited. Therefore, the issue of funding for forest resources management remains open. The volume of expenses incurred by the state for use in forest maintenance is significantly higher than the volume of revenue received from the sector. Therefore, the issue of generating alternative and supplemental revenue streams remains open. In this regard, very interesting perspectives emerge

in the direction of the development of the tourism sector, which can significantly change the general strategy of the use of the Georgian Forest Fund and focus in the direction of recreation in future. The research presented is based on the development of forests' recreational function and the development of tourism through the development of new income streams.

All of this can therefore be concluded:

1. Forests are a habitat for a wide variety of plants and animals. Their existence depends on forest health, sustainability, vitality, and quality of its protection. In Europe, almost half of the ferns and floral plants inhabit the forest. Because of its size and structural diversity compared to other ecosystems, most of the animals are found in the woods. The ecosystem services that forests provide are enormous. Water catchment and soil protection are especially important.
2. In addition to direct physical and biological protective functions, forests have acquired important recreational functions in recent years. Urban populations, especially the industrialised countries, are undergoing constant stress, which can be cured with relaxation and spending time in nature. Tourist locations in the areas adjacent to the towns, the majority of which are in forested areas, occupy an important place in the daily life of the population.
3. The use of forest resources in Europe has been linked to timber, but in recent years the situation has changed, as evidenced by a reduction in lumber production. In European and North American countries, the timber extraction in 2005 was 1.3 billion cubic meters and decreased to 1 billion cubic meters in 2011. There has also been a sharp decline in the price of timber, caused by excessive production and economic difficulties.
4. Since the beginning of the 21st century, the situation has changed radically in European countries. Forests' recreational and tourism function has significantly increased and substituted timber production businesses. This has greatly contributed to the popularity of ecotourism in European countries over the last 10–15 years. The defining feature of this form of tourism is the fact that tourist facilities are located in rural settlements and in the forests surrounding towns.
5. In many European countries, forests' recreational function is an alternative source of income instead of the extraction and processing of forest resources. As a result, recreation and tourism became an important part of many forestry activities. Due to the above mentioned, loading of rural and wooden zones is becoming less centred on the production of wood and timber. In addition, forests have contributed to the development of recreational resorts. Presumably, the role of forests in recreation and entertainment, and in natural and ecological tourism will grow.
6. Natural forests are subject of great interests for tourists as the number of natural forests is very low in Europe and is decreasing worldwide.
7. The development of natural and ecological tourism has significant potential for Georgian development, as the country is rich in natural forest resources. The existence of healthy and intact forests is also important for tourism development, which, in turn, should promote the development of the forestry sector. All of this makes it possible for Georgia, in its socio-economic development, to use the experience of other countries in the transition stage and to avoid irreversible changes in the environment in which we live.
8. Tourism is one of the fastest growing sectors in Georgia and plays a major role in the country's economy. Tourism plays a significant role in maintaining Georgia's balance sheet, as 61.4% of the country's export revenue comes from tourism and its volume in 2015 exceeded 1.94 billion USD. The number of international traveller's increases annually, and the total number in 2015 was 5,901,094. The share of tourism in Georgia's gross domestic product is 6.7%.
9. The increase in tourism activity has contributed to the promotion of tourism through many events and project implementations in recent years. Rehabilitation / reconstruction of tourist places have been carried out, alongside the construction / restoration of tourism infrastructure, and development of new tourist destinations.

10. The forest has a huge social and cultural role for the Georgian population. Forest resources are also of great importance in the economic activity of the rural population. However, the total value of the products created by the forest sector is only 86.6 million, which is only 0.3% of gross domestic product.
11. According to 2015 data, 961 people (108 women) are officially engaged in the forestry sector, which is a small figure, given the fact that 40% of Georgian territory is covered by forest.
12. According to the National Forestry Agency data, in 2006, 616,200 cubic metres were obtained from official sources, whereas the largest part – 515,000 cubic metres came from social cuts.
13. At the same time, the bulk of Georgian forests have a protective function, and due to its geographical characteristics, (slope inclination) cannot be used for agricultural activities.
14. Analysis of the expenses incurred in the forestry sector, undertaken in the "Forest Resource Assessment" (FAO) -2015 show that the expenditure incurred by the state exceeds the revenues received by the majority of countries in the form of taxes or other forms of budget.
15. In the field of sharing and implementing practices, the National Forestry Agency has a very interesting and successful example in the form of protected areas, which have shown considerable success in the field of recreational management in the last 10 years.
16. Development of tourism in the protected areas has been particularly intensive in recent years. By 2015 the number of visitors exceeded 518,000 and the annual revenue received from tourism reached almost 1.5 million. In addition, it has been demonstrated that income from tourism also contributes to the welfare of the local population.

Recommendations

1. The National Forest Agency may be used as an alternative source of income to develop tourism infrastructure in high conservation areas;
2. Revenue can be generated directly by the National Forest Agency, with the creation and development of relevant tourism infrastructure in the forest fund of their management field;
3. An important potential source of revenue is the issuance of forest use licenses for commercial facilities (hotels, restaurants, leisure houses, resorts, etc.) and the use of "special functional precincts" (cf.) mechanisms;
4. For the development of natural and ecological tourism, it is necessary to develop a "Tourism Development Strategy and Action Plan within the Forest Fund", which should define the main directions and priorities of the field development. It should have a special emphasis on:
 - The development of tourism infrastructure and its subsequent management;
 - The reduction of risks caused by tourism development;
 - The development of strategic partnerships with the private sector;
 - Cooperation and coordination with various state agencies (especially the National Tourism Agency, Agency of Protected Areas, the Ministry of Economy and Sustainable Development, and the Ministry of Regional Development and Infrastructure);
 - Natural and ecological tourism management and risk minimisation issues (waste management, safety, health care, etc.);
 - Issues of retraining and motivating forest agency staff;

5. It is important to use the possibilities of existing tourist infrastructural elements within the protected areas and to synchronise the activities within the forest fund with the management plans of the protected areas and the protection regimes;
6. It is necessary to coordinate tourism activities within buffer zones of protected areas, creating additional comfort for tourists in protected areas. In this regard, the successful examples of pilot projects can be used, (for example, the Sviana recreational area, which will be interesting for tourists heading to Tusheti).
7. A substantial source of alternative revenue can also be obtained by arranging of hunting farms within the Georgian Forest Fund, which, together with conservation measures, should help maintain biodiversity. It is necessary to assess the capabilities of the National Forest Agency in this regard and prepare recommendations;
8. In order to assess the function of recreation, it is necessary to zone forest areas (taking into consideration the principles of categorisation presented in the new code), and territories with recreational status shall be identified;
9. It is necessary to conduct social surveys to determine the values associated with forest use, expected benefits, and trends. Relaxation and tourism-related research should focus on new difficulties and trends such as forest structure, growing changes and their results, etc.
10. In order to manage existing risks forest recreation, it is necessary to implement active forest management in order to ensure the ecological function of the forest. Economic analysis is needed to take balanced measures that include ecological liability and socio-economic benefits;
11. It is very important to raise the level of knowledge and education of persons responsible for forest management. Mechanisms for motivating and imposing additional responsibilities for forest workers, foresters and rangers shall be elaborated.

Annex 1

Protected territories

The Law of Georgia on Protected Territories, developed in 1998, played a decisive role in the establishment of protected areas. With the aforementioned normative act, the main legislative base in Georgia was created for establishing a system of protected areas that conform to international standards.

The law defines aspects of the establishment, development, and functioning of protected areas, establishes the system responsible for management on different levels, and determines permissible activity within the various protected areas. According to this normative act, the state policy of establishing, functioning, and managing the protected territories, as well as coordination and control of activities is carried out by the Ministry of Environment and Natural Resources Protection, through its LEPL "National Agency of Protected Areas."¹ This structure manages the protected areas, develops management plans and more. The Georgian Law on the System of Protected Areas was defined by the management communities of the protected areas and the procedures for the establishment of Protected Territories. These categories are:

1. State Reserve;
2. National Park;
3. Managed Reserve;
4. Natural Monument;
5. Protected landscape;

6. Multipurpose use area.

This law, on the other hand, is based on the recommendations of the International Union of Nature Conservation (IUCN).

According to the law, it is possible to establish biosphere reserves, world heritage sites, and wetlands of international significance. Georgia is the first country in the region that has adapted legislation regarding protected areas in accordance with international standards.

The establishment of protected areas of international standards began in the mid-1990s, when the Borjomi-Kharagauli National Park was founded. The Ministry of Environment Protection of Georgia, the State Department of Protected Areas, and the Forestry Department were involved in the process due to support from the World Wildlife Fund. Therefore the joint management plan for Borjomi-Kharagauli National Park was elaborated. During the same period, a plan to establish Protected Areas in the eastern Caucasus in Iori, Kolkheti, Adjara-Imereti, Central Caucasus, Erusheti, Shavsheti, and Abkhazia were developed.

The establishment of the Kolkheti National Park occurred in 1998 with the help of international donors. The National Park is a key protected area for migratory birds (especially waterfowl birds) on the eastern Black Sea road, and its creation is internationally important for migrating birds.

In 1999 Georgia adopted a new Forest Code. It regulates legal relations regarding the maintenance, restoration, and use of the Georgian Forest Fund and its resources. In terms of biodiversity one of the most important tasks of the code is to protect the Georgian Forest Fund, maintain the virgin forests, to protect plants of relic, endemic, and other valuable species. The 46th article of the forest code has a clear statement regarding protection of forest biodiversity.

The Law of Georgia adopted in 2003 on the "Creation and Management of Tusheti, Batsara-Babaneuri, Lagodekhi and Vashlovani Protected Areas" also played an important role in the development of the network of protected areas in Georgia. On the basis of this law, important protected areas such as the Tusheti and Vashlovani Protected Areas have been enlarged within the Lagodekhi Reserve. From this period on it established a network of modern protected areas in Georgia, which includes national parks, reservoirs, and nature monuments in addition to the reserves. At the same time, with the assistance of international donors, preparation of the management plans of the protected areas and the introduction of modern management systems began.

The establishment of protected areas continued in the following years. Important national parks were created, such as Javakheti, Machakhela, and Khevsureti National Parks. The network of natural monuments was expanded. At the stage of planning, the Central Caucasus, Samegrelo and Erusheti Protected Areas were selected. Finally, in accordance with the requirements of the National Biodiversity Strategy and Action Plan (adopted in 2014), the area of protected areas must reach 12% of the total area.¹

Apart from the creation of protected areas, other mechanisms for biodiversity protection have been created in Georgia. The law on Georgia's "Red List" and "Red Book," adopted by the Parliament of Georgia in June 2003, also plays an important role.

The law defines which species are threatened and endangered, and the legal definition of the Red List of Georgia and the Red Book². The law also defines the structure of the red list, the criteria for species to be included in the list, the elaboration of the

¹ At the moment, protected areas are 8% of the country's territory (0.5 million Hectares)

² Legally, red book is for awareness raising only

project, and adoption and renewal (revision) procedures. This law regulates issues related to planning and financing measures for the protection, extraction, reinstatement and maintenance of endangered species.

In the context of establishing a network of Protected Areas, it is considered an important step in the creation of the "Emerald network", which is being implemented within the framework of the European Wildlife and Natural Habitat Convention. In addition, the establishment of the network is part of the Association Agreement signed between the EU and Georgia.

In addition to the Emerald network, Georgia should also establish important sites for birds and so-called "ramsar watershed" networks. Establishing global categories such as UNESCO World Heritage Sites and the UNESCO Biosphere Reserves will promote the growth of the country, attract additional funds in the protected areas, and encourage tourism development in the country.

Management and Financing of the Protected Territories

Generally, the Agency for Protected Areas is responsible for the administration of Georgian protected areas. It is designed to implement state objectives and public functions in the field of protected areas. One of the main objectives of the agency is to ensure the proper functioning of the administrative offices of the protected areas and monitoring that rules set by the legislation are met.

The agency's sphere of activity includes the management of state reserves, national parks, natural monuments, deforestation, protected landscapes, biosphere reserves, world heritage sites, and wetlands of international importance.

The Agency of Protected Areas, along with its other functions, ensures adequate conditions for recreational, health care, and tourism activities in natural and historical-cultural environments, which in turn contributes to stimulating the savings and agricultural activities of territories and natural resources.

The management of each protected area is maintained by the administration of the protected area, which has the appropriate infrastructure. Territories' administrations are territorial units of LEPL "Agency for Protected Areas". Their goals, functions and activities are determined by the Management Plan of the Protected Areas, approved by the minister of environment.

In recent years, the state budget has increasingly funded protected areas. The establishment of the Agency of Protected Areas as a legal entity in 2008 facilitated additional funding, including services provided to visitors in national parks and concessions. Today, the contribution of the Agency for Protected Areas to its own revenues constitutes about 12-13% of its annual budget, which should be considered a major success, and there is a positive trend in this direction. The agency is planning to expand its existing tourism marketing and public relations programs in order to attract greater numbers of visitors and thus increase income. Alternate mechanisms for financing the protected areas have also been established. For instance, in 2010, the Kolkheti Protected Areas Development Fund was created.

In 2009, with the support of UNDP / GEF, the project "Promoting the Financial Sustainability of Georgia's Protected Areas System" was implemented. The project includes a 10-year (2012-2022) investment plan that will assist the Agency for Protected Areas and determine necessary investments. The main objective of the plan is to attract additional funds, which will facilitate the development of human resources and the institutional capacity of the Agency of Protected Areas (both at the office and administrative level); the development of the infrastructure necessary for the protected areas; maintenance of existing

infrastructure; provision of necessary equipment; improvements to fire safety and increasing safety precautions; and expansion of existing programs for tourism marketing and public relations. An important part of the plan is to promote public-private partnership and public-public partnerships to increase revenue. To this end, the plan considers it necessary to invest in the capacity of the Agency for Protecting Territories.

Creating a system based on a uniform, equipped, and modern methodology of monitoring is one of the most challenging and crucial tasks that the Agency of Protected Areas must solve. Not only does biodiversity need to be monitored but also the activities of the public (firewood provision, use of pastures, etc.), tourism, as well as dealing with poaching cases and more.