

NATURAL RECREATION POTENTIAL OF GEORGIA AND PROSPECTS FOR ITS REALIZATION

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Georgia, despite relatively small territory, has a number of valuable natural resources. Their efficient use is of great importance for purposes of sustainable development of the country. Scientific study of the whole variety of Georgian natural resources in view of regions suggests that the country has considerable recreational opportunities. The paper contains a brief physical-geographic description of Georgia, and general characteristic of recreational resources. While considering the issues of realization of Georgian resource potential, it seems reasonable to get acquainted with the experience accumulated in European countries similar in physical-geographic parameters and possession of natural resources. For this purpose the authors examine two European countries (developed and developing ones): Switzerland and Slovenia. The authors give the information concerning natural resources of the mentioned countries, analyze different aspects of the development of recreational sphere in those countries which are of interest from the standpoint of the establishment of this sphere in Georgia.

Georgia, despite relatively small territory, has a number of valuable natural resources. The issue of their efficient use is of great importance from the standpoint of guaranteeing sustainable development of the country and must be based upon a comprehensive scientific research. The research of the whole range of problems related to the natural resources is being conducted at the Center Studying Natural Resources of Georgia at the Georgian Technical University. Taking into account a great variety of physical-geographic conditions and natural resources in different parts of the country, the Center conducts a detailed study of natural resource potential of all the regions of Georgia [1-10].

Scientific study of the whole variety of Georgian natural resources in view of regions suggests that the country has considerable recreational opportunities. First of all, let us view general description of recreational resources. Recreational resources are resources to be used for recreation, resort therapy and tourism. As it is known, this kind of resources includes natural complexes and their components such as relief, landscapes, climate, water resources, flora and fauna, as well as cultural and historical-architectural sights with due regard to relevant infrastructure and human resources.

The climate is one of the most important components of recreational resources. Georgian climate is rather comfortable that gives an opportunity to develop the sphere of resorts and tourism. The variety of natural and climatic

zones makes it possible to build coastal and mountain climate resorts, balneoclimatic and balneotherapeutic health resorts of which the most promising are resorts located in seaside and mountainous areas. A large variety of mineral waters (there are almost all kinds of mineral water in Georgia according to modern classification) allows to create an extensive network of specialized resorts. Another kind of natural-recreational resources – therapeutic muds may also contribute to the creation of a territorial-recreational system of the country. The vegetable world, in the first place – forests and a peculiar fauna are another important components of recreational resources. Rugged relief, variety of natural landscapes are essential factors for the development of recreation and tourism industry. Noteworthy are different karst formations (caves, cavities, abysses, etc.). Georgia is among the world leaders not only according to their quantity, it is one of the world's top ten countries with the deepest caves, and just in Georgia (in the Arabika Massif of the Western Caucasus) is located the Kruber cave, the deepest one on Earth (2,197 meters deep) [11]. Of great interest for the visitors to the country are also numerous mountain rivers, lakes, waterfalls, etc., the most part of which are surrounded by beautiful mountain landscapes to be highly attractive tourist objects. Unique natural conditions of Georgia offer the country an opportunity to become one of the centers for winter sports whose popularity is growing all over the world.

In the context of the realization of Georgian recreational potential worth mentioning are the objects of cultural-educational tourism. Centuries-old history of Georgia is reflected in a great number of historical and architectural monuments of different epochs located in all regions of the country and being very attractive to the visitors.

As mentioned above, the existence of suitable natural conditions is of the prime significance for the development of recreational sphere. Therefore let us take a look at physical-geographic characteristic of Georgia.

Georgia is situated in Europe and Asia border area, to the south of the Greater Caucasus, in particular in the central and western part of South Caucasus, on the eastern coast of the Black Sea. It covers 70 sq. km. A small part of the country territory is situated on the northern slope of the Greater Caucasus. Georgia is bounded on the west by the Black Sea, and is bordered by the Russian Federation to the north, Azerbaijan to the east, Armenia to the south, and Turkey to the south-west [12].

Georgia is distinguished by complex relief, two-thirds of its territory is mountainous. The mountain system of the Greater Caucasus occupies more than one-third of the country area located along the northern boundary. The relief is represented by high, middle and low mountains, highlands and valleys. According to the relief features, there are three big geomorphological zones in Georgia: mountains of the Greater Caucasus, Georgian intermountain plain, southern mountainous region of Georgia [13-15].

The border between subtropical and temperate climate belts is along with the main dividing ridge of the Greater Caucasus, and due to this Georgia is located in the extreme north part of subtropical climate belt. There are almost all climate types of subtropical climate belt in Georgia: humid subtropical climate, subhumid climate, mild-dry climate, and arid-continental climate that is caused on the one hand by the location of Georgia at the border between subtropical and temperate climate belts and on the other hand by natural barriers: the influence of the Greater Caucasus and southern mountainous region and the Black Sea.

The climate of Georgia is varied. On relatively small territory there are almost all climate zones – from humid climate on the Black Sea coast and arid subtropical zone in East Georgia to the zone of perpetual snow and ice in the Greater Caucasus. The variety of Georgian climate is caused on the one hand by its location on the northern border of subtropical zone between the Black and Caspian Seas, and on the other hand by the complexity of its relief. The Black Sea and Caucasian mountainous system exert an impact on local climate.

Peculiarities of Georgian climate result from three main factors: solar radiation, atmospheric circulation and character of earth surface. Solar radiation is the main affect-

ing factor. Due to the low-latitude location and moderate clouds Georgia gets much warmth of the sun. The annual rate of sunlight duration varies according the areas from 1350 to 2520 hours [16, 17].

Due to the complexity of orographical conditions and prevailing processes of atmospheric circulation, distribution of precipitation by seasons is peculiar; in West Georgia precipitation maximum is in winter or autumn, minimum in spring or summer, in East Georgia maximum is in summer or beginning of summer, minimum in winter. According to climate conditions the territory of Georgia is divided by two climatic zones and one subzone: marine humid subtropical climatic zone, zone of transition from subtropical continental climate to marine climate and included in this zone a subzone of transition from dry subtropical climate of Western Asian mountainous region to subhumid climate [18].

The country is rich in drinking water, mineral and thermal waters. The use of thermal water is very promising, e.g. for medicine purposes. Well-known is Tskhaltubo and Tbilisi thermal water. Georgian inland water (rivers, lakes, glaciers, ground water) is one of the important country's natural resources [19, 20].

Due to its location on the Caucasian neck connecting Europe and Asia, there are different floral and faunal regions in Georgia. Environmental conditions in West Georgia plane considerably differ from those in East Georgian plane, environmental conditions of the Greater Caucasus is different from natural environment of mountainous region in South Georgia. Georgian plant cover is rich due to the variety of physical and geographic (including climatic) conditions within the Georgian territory and existence of phyto-landscapes of different genesis. Here, on the comparatively small territory, different plant formations are spread: beginning with foothill semideserts in arid regions of East Georgia and thick forests located in humid, almost subtropical climate in the same belt in Kolkheta (West Georgia) and ending with specific vegetable world of severe climate in high-mountain region. About 21% of Georgian flora (or about 900 species) are endemics, including 600 Caucasian endemic species and 300 – local endemics.

The main types of Georgian flora are as follows: bog, forest, bush, meadow, tall herbage, steppe, semi-desert, flora of rock-debris area, flora of coastal sandy-pebble ecotopes. Plant cover is one of the most important components of natural environment, and its condition has considerable impact on the preservation of other components of nature: soil, water, air, animal world [21-24]. Of major importance in plant cover are forests as especially valuable natural resource which occupies more than one-third of the country territory. Forests perform soil-protective and water-conservation functions, contribute to the preservation of power

potential of Georgian rivers, improve climatic conditions. Georgia distinguished by its natural landscapes is rich in faunistic resources. There are many local (including endemic) and relic species. The animal world as a component of natural environment is of great importance for the country [25-27]. It plays a big part in the formation and functioning of ecosystems which greatly contribute to soil fertility, biological properties of water, represent a necessary link in circulation of substance and energy. Animals are of great importance from cultural, scientific, esthetic and educational standpoint. Bird fauna is of especial importance in pest control in agriculture and forest management.

Georgia is situated at a transport intersection which has always connected countries of the North and the South, the West and the East. Just here the Great Silk Road passed in former times. This arterial road has become still more significant in the current conditions. Highly advantageous geographical location of Georgia provides its connecting role for Eastern and Western civilizations, contributes to the establishment of peaceful coexistence of Christians and representatives of other religions, promotes successful economic development of the country. Georgia has good communication potentialities, both overland and marine. Via the Black Sea, Georgia has the opportunity to establish communication with many countries of the world, in the first place with the countries of the Black Sea and Mediterranean basins, as well as ones of Eastern and Central Europe.

The presented brief physical-geographic description of Georgia gives general information on natural-resource potential and at the same time allows us to carry out its comparison with some European countries. While considering the problems of realization of Georgian resource potential, it seems reasonable to get acquainted with the experience accumulated in European countries similar in physical and geographic characteristics and possession of similar natural resources. In our view, it is appropriate to use both developed and developing European countries as objects of comparison. We have chosen Switzerland and Slovenia. Switzerland is situated in Western and Central Europe, and is bordered by Italy to the south, France to the west, Germany to the north, and Austria and Liechtenstein to the east [28]. It covers 41,3 sq. km. Switzerland is a landlocked country geographically divided between the Alps, the Swiss Plateau and the Jura. Extending across the north and south side of the Alps in west-central Europe, Switzerland encompasses a great variety of landscapes and climates on a limited area. It contains three basic topographical areas: the Swiss Alps to the south, the Swiss Plateau or Central Plateau, and the Jura mountains on the west. There are many glaciers among the high valleys of the Swiss Alps, and from these originate the headwaters of several major

rivers, such as the Rhine, Inn, Ticino and Rhône, which flow in the four cardinal directions into the whole of Europe. The hydrographic network includes several of the largest bodies of freshwater in Central and Western Europe. Switzerland has more than 1500 lakes.

The northern part of the country called the Swiss Plateau has greater open and hilly landscapes, partly forested, partly open pastures, usually with grazing herds, or vegetables and fruit fields, but it is still hilly. There are large lakes there and the biggest Swiss cities are in this area of the country.

The Swiss climate is generally temperate, but can vary greatly between the localities, from glacial conditions on the mountaintops to the pleasant near Mediterranean climate at Switzerland's southern tip. Summers tend to be warm and humid with periodic rainfall. The less humid winters in the mountains may have long intervals of stable conditions for weeks, while the lower lands tend to suffer from inversion, during these periods, thus seeing no sun for weeks.

The driest conditions persist in all inner alpine valleys. Large alpine areas remain drier than pre-alpine areas. The wettest conditions persist in the high Alps and in the Ticino canton. Precipitation tends to be spread moderately throughout the year with a peak in summer. Autumn is the driest season, winter receives less precipitation than summer, yet the weather patterns in Switzerland can be variable from year to year.

Geographical location of Switzerland is advantageous: the country is situated at the crossroads of West European communication routes. Until the mid-19th century, Switzerland was on the economic periphery of the European continent, country economy was mainly agrarian. The existence of transit routes between the West European industrial regions (Germany, France, Italy) through the territory of Switzerland has contributed to the development of trade. Another source of incomes became foreign tourism. Unique Swiss landscapes have attracted a great number of tourists to the country, and by the early 20th century small-area Switzerland, despite the lack of mineral deposits, has become one of the world's richest countries. Nowadays, Switzerland belongs to the major economies of Europe, and is among the world leaders by gross domestic product per capita.

Even the above given brief review shows that there is a similarity between Switzerland and Georgia in terms of a number of physical-geographic parameters and advantageous geographic position. At the same time, other characteristics differ greatly, e.g. unlike Georgia, Switzerland does not have an outlet to the sea, the country is not rich in mineral resources (while there are deposits of metals and nonmetal ores, natural building materials, oil, natural gas, coal, brown coal and turf in Georgia [29-31]). Never-

theless, due to its unique landscapes, natural and climatic conditions and geographic location (i.e. factors characteristic of Georgia as well) Switzerland has become one of the richest countries, and tourist sphere provides the major portion of financial receipts.

The most attractive for foreign tourists is recreation at the ski resorts of Switzerland. Swiss alpine resorts are famous for their nice weather and good snow being very popular with both professional downhill skiers and enthusiasts of alpine recreation. There are all-year ski resorts in the country which function even in summer. Thanks to a wide selection of services, comfortable recreation at the Swiss resorts is accessible to not only wealthy people but also the middle classes.

It is evident that the creation of similar alpine resorts in Georgia would promote economic development of the country. The Swiss experience shows the importance of tourist industry including hotel business, catering trade, mountain guide service, winter sports training, souvenirs manufacturing and trading; all the mentioned activities return considerable profit to the country. To be successful modern tourist industry should include relevant facilities, such as: hotels and motels; restaurants and public catering facilities; travel agencies and transportation firms; education institutions to train specialists for tourist industry; information and advertising services; tourism management bodies and research institutions to gather and process statistical data on tourism, to make scientific forecasts, conduct investigations in the spheres of economy and sociology of tourism; enterprises to produce tourist consumption products and retail industry enterprises for these products. Naturally, it took considerable time for Switzerland to reach modern level of economic development including tourist business. However, Georgia which became independent not long ago has a number of natural resources that are not in Switzerland. One of such advantages is the existence of seashore that greatly increases recreational opportunities of the country. Thus, the development of tourist industry in Georgia with due attention to the mentioned aspects will promote the creation of world-class resort zones not only in mountainous areas but also on the Black Sea coast and other regions of the country. Additionally, comparatively small distance between Georgian regions with different natural-climatic conditions provides an opportunity to the visitors to have a combined rest, for instance right after the recreation in high-mountain zone to go down and continue their holidays on the Black Sea coast.

In the context of possession of concrete natural resources one can draw parallels between Georgia and some other European countries as well. As an example we can view Slovenia which in common with Georgia has settled down to a course of independent development a few decades ago.

Slovenia is situated in southern Central Europe, located at the crossroads of main European cultural and trade routes. It is bordered by Italy to the west, Austria to the north, Hungary to the northeast, Croatia to the south and south-east, and the Adriatic Sea to the southwest [32]. It covers 20,3 sq. km. The territory is mostly mountainous with a mainly continental climate, with the exception of the Slovene Littoral that has a sub-Mediterranean climate and the north-western area that has an Alpine climate. The Dinaric Alps and the Pannonian Plain meet on the territory of Slovenia. The country, marked by a significant biological diversity, is one of the most water-rich in Europe, with a dense river network, a rich aquifer system, and significant karst underground watercourses. The Karst Plateau in the Slovene Littoral gave its name to karst, a landscape shaped by water dissolving the carbonate bedrock, forming caves.

Slovenia is situated in Central and Southeastern Europe touching the Alps and bordering the Mediterranean. Four major European geographic regions meet in Slovenia: the Alps, the Dinarides, the Pannonian Plain, and the Mediterranean. These macroregions are defined according to major relief units and climate types (submediterranean, temperate continental, mountain climate). These are often quite interwoven.

The climate of Slovenia is also influenced by the variety of relief, and the influence of the Alps and the Adriatic Sea. In the northeast, the continental climate type with greatest difference between winter and summer temperatures prevails. In the coastal region, there is sub-Mediterranean climate. The effect of the sea on the temperature rates is visible also up the Soca valley, while a severe Alpine climate is present in the high mountain regions. There is a strong interaction between these three climatic systems across most of the country.

The territory of Slovenia mainly belongs to the Black Sea basin, and a smaller part belongs to the Adriatic Sea basin. These two parts are divided into smaller units in regard to their central rivers. In comparison with developed countries, water quality in Slovenia is considered to be among the highest in Europe. One of the reasons is undoubtedly that most of the rivers rise on the mountainous territory of Slovenia.

The forests are an important natural resource of Slovenia, over half of the territory is covered by forests: the country is the third most forested country in Europe. Slovenia contains thousands of animal species.

The variety of natural resources gives Slovenia a good opportunity to successfully develop tourism. Tourist season is year-round: in winter tourists visit ski resorts, in summer seaside resorts, and in autumn and early spring visitors have a good selection of health resorts with mineral water

springs. One can bathe in the sea and mountain lakes from the early June and till the early October.

Slovenia offers tourists a wide variety of natural and cultural amenities. Different forms of tourism have developed. Plenty of choices offered to the tourists include water-based recreation, spas and mudtherapy, visits to the world of underground karst caves and local vineyards, tasting of ethnic foods. Recreation may present calm holidays at the seaside or active sporting leisure, or excursion programme. In addition to sightseeing, guided tours of Slovenia offer visiting historical places. Rich cultural heritage, historic cities, architectural and religious monuments including ancient castles and monasteries as well as delectable cuisine and odorous local wines attract many foreign tourists to Slovenia. Most of foreign tourists come to the country from the European countries: Italy, Austria, Germany, Croatia, Benelux, Serbia, Russia and Ukraine, followed by UK and Ireland.

The comparison of natural resources of Slovenia (which during a short period of time has become a favorite country of recreation and therapy for thousands of foreign visitors) with natural resources of Georgia suggests that it is possible to create a modern system of recreational zones in Georgia as well. If the industry of tourism provides high level of recreation, treatment and services to the visitors, Georgia, with its valuable natural-recreational resources, a great number of cultural and historical monuments of different epochs, age-old winemaking traditions and worldwide famous cuisine, may join the world's most visited countries. Special attention should be paid to the potential of educational tourism: it gives a possibility to foreign visitors to get acquainted with centuries-old history of Georgia, visit world-famous monuments (including UNESCO-listed ones) as well as a large variety of no less valuable monuments in all regions of the country.

The analysis given above mainly concerned natural-recreational resources. As already noted, Georgia is also rich in a number of other natural resources whose efficient use will also contribute to economic growth of the country. While preparing long-term programs for management of any kinds of natural resources it would be useful to have a look at relevant foreign experience, to provide a background for introduction of advanced technologies and modern approaches in this sphere.

One more aspect of the issue under consideration is environmental safety assurance. Along with the growth in demand for natural resources, anthropogenic impact on the environment grows as well; economic activities considerably damage flora and fauna of the country. Rational nature management, introduction of resources-saving technologies, waste recycling, water purification, land recultivation and some other arrangements will reduce negative impact

on the environment [33]. In order to resolve the whole range of the problems the experience accumulated in some foreign countries will be of use for Georgia; fruitful will be cooperation with foreign colleagues.

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ПРИРОДНО-РЕКРЕАЦИОННЫЙ ПОТЕНЦИАЛ ГРУЗИИ И ПЕРСПЕКТИВЫ ЕГО РЕАЛИЗАЦИИ

О.И. Паресишвили, В.А. Мирзаева

Грузия, несмотря на небольшую территорию, обладает целым рядом ценных природных ресурсов, эффективное использование которых является важным условием устойчивого развития страны. В стране отмечается наличие существенного рекреационного потенциала. В статье приводится краткое физико-географическое описание Грузии, а также дается общая характеристика рекреационных ресурсов. При рассмотрении вопросов реализации рекреационного потенциала Грузии целесообразно ознакомиться с опытом ряда европейских стран, схожих по физико-географическим параметрам и наличию соответствующих ресурсов. С этой целью авторы рассматривают две страны Европы (развитую и развивающуюся): Швейцарию и Словению. В статье приводится информация о природных ресурсах указанных стран, рассматриваются различные аспекты развития в этих странах рекреационной сферы, представляющие интерес с точки зрения становления этой отрасли в Грузии.