

Article

# Integrative geography—Current issues in theory and practice (on the example of the Georgian geographical school)

Nodar Elizbarashvili<sup>1\*</sup>, Luka Davitashvili<sup>1</sup>, Rusudan Elizbarashvili<sup>2</sup>, Luiza Bubashvili<sup>1</sup>, Tinatin Nanobashvili<sup>3</sup><sup>1</sup> Department of Geography of Georgia and Landscape Planning, Tbilisi State University, Tbilisi 0179, Georgia<sup>2</sup> Department of Human Geography, Tbilisi State University, Tbilisi 0179, Georgia<sup>3</sup> Department of Geomorphology and Cartography, Tbilisi State University, Tbilisi 0179, Georgia\* **Corresponding author:** Nodar Elizbarashvili, [nelizbarashvili@yahoo.com](mailto:nelizbarashvili@yahoo.com)

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**Abstract:** The article discusses the essence of integrative geography and its importance for the theory and practice of geographical science. Such areas of integrative geography are characterized, the development of which will further increase the importance of applied geographical science. They include teaching about cultural landscape and historical landscape (part of landscape studies), geoecological expertise and environmental impact assessment (part of geographic ecology), geographic archeology and ecological culture (part of historical geography), landscape management and landscape services (part of landscape planning), and tourism—Assessment and planning of recreational resources (part of recreational geography).

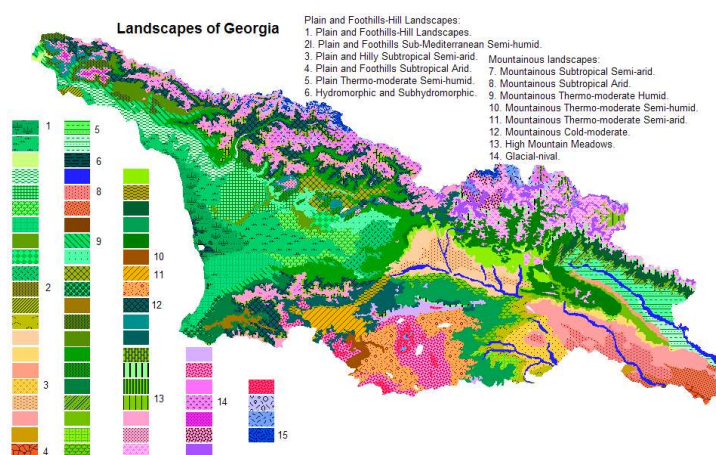
**Keywords:** integrative geography; cultural landscape; historical landscape; geo archeology; ecological culture

## 1. Introduction

Integrative Geography [1,2]. It is the third main branch of geography, the history of which is one century long. It is also known in different geographical schools of the world as social-natural geography, synthetic geography [3,4], unified geography, regional geography [5,6], physical anthropogeography, environmental geography, or human geography, although its content is essentially represented by the term integrative geography. Thus, integrative geography studies the spatial-temporal features and regularities of the interdependence of society and nature. In integrative geography, public and related natural processes in the geographical environment (or vice versa) are considered equally important. Integrative geography is the most important arena of modern geography, which is related to its relevance, greatest application, and development prospects. The main areas of integrative geography include country studies (regional geography), landscape geography (landscape studies), geographic cartography, military geography, geographic ecology, medical geography, natural resource geography, human ocean geography, landscape planning [7], environmental impact assessment, geoecological expertise, geographic forecasting, etc. [8,9]. A clear example of integrative geography is landscape science and geographic cartography. Both of them require a complex approach and a synthetic vision. However, landscape science in Georgia still remains under the influence of the Russian geographical school and is considered a part of physical geography. Such an approach harms the importance of landscape geography and prevents the development of such “Western” directions as landscape planning, landscape services and landscape

management, landscape perception, cultural and historical landscape research [10,11], landscape recreation, etc.

The current geopolitical, ecological, and socio-economic processes in Georgia require a new understanding of the development prospects of the Georgian school of geography. Along with theoretical research, which is a necessary prerequisite for the development of science, it is desirable to rapidly develop and popularize applied geographical directions, to grasp the European experience of geographical research, to expand cooperation with international organizations, and to show the importance of integrative geography (the focus of different directions of geography on the complex study and solution of interconnected topics). The agenda includes the research of issues that demonstrate the greatest importance of geographic education and science in solving the problems of sustainable development.



**Figure 1.** Natural landscape diversity of Georgia [12].

The Georgian school of geography, more than ever, needs to focus on the problems of sustainable development of mountainous areas [13] and the need to involve various scientific or practical organizations interested in similar topics.

Modern geography is concerned with both the assessment of the geographical environment and the modeling and forecasting of the development of the environment. Global modeling, which is very popular in the world's leading scientific circles, and has been widely spread since the 1980s of the 20th century, has undergone gradual "geographicization" and regionalization. Such a situation leads to the fact that any global or regional problem (political, economic, social, ecological, demographic, etc.). It is possible to analyze geographical, regional, or local events through analysis and reconciliation. Because of this, many types of global problems cannot be modeled and predicted without an integrative approach, complex geographic analysis, and synthesis. In addition, the aspiration towards unified geography, and the integration of geographical disciplines is due to the "non-geographical" trends in the development of sectoral geographical directions, the need to assess the extent of anthropogenic transformation of the natural environment (**Figure 1**), and the consequences of environmental impact. As noted by the prominent Georgian geographer, Professor Niko Beruchashvili (1947–2006), complex physical- and economic-geographic research appears as the main task of geography, a social order [14]. It is a fact that the effectiveness and applied value of geography are greater the more integrated and

complex the space-time research is, the more geographical events and processes are considered in a cause-and-effect relationship, and the more complete their forecasting.

Any nature-beneficial project requires the analysis of natural factors and socio-economic processes, as well as a unified geographic assessment and expertise. Two scientific directions can claim to create the conceptual foundations of rational nature use: ecology and integrative geography. The majority of proponents of integrative geography consider the research task to be the study of the spatio-temporal characteristics of the interdependence of man and nature both in the geographical framework (global, regional, and local points of view) and in the territory of different ranks (river basins, administrative units, settlements, and landscapes). In many Western countries (USA, Great Britain, France, the Netherlands, Belgium, etc.), geography is considered a unified science, although here the main emphasis is on the analysis and forecasting of socio-economic processes.

## **2. Research methodology**

A relatively small amount of scientific literature on integrative geography (environmental geography, human-environment geography) can be found. However, most scientists recognize the effectiveness of complex, systematic geographical research for the theory and practice of geography, and its importance in analyzing the spatio-temporal features of sustainable development problems [15–26].

The research methodology is based on both the analysis of scientific literature and the results of physical-geographical and public-geographical field research conducted in Georgia and the Caucasus. They are mainly related to the assessment of the geographical environment and territorial (spatial) planning. The results of the field research were reflected in the landscape planning methodology of several protected areas (national parks), urban agglomerations (Tbilisi-Rustavi), and historical cities (Mtskheta). All of them are based on the well-known landscape planning methodology [9,27,28], which has a long history in the geographical schools of many European countries.

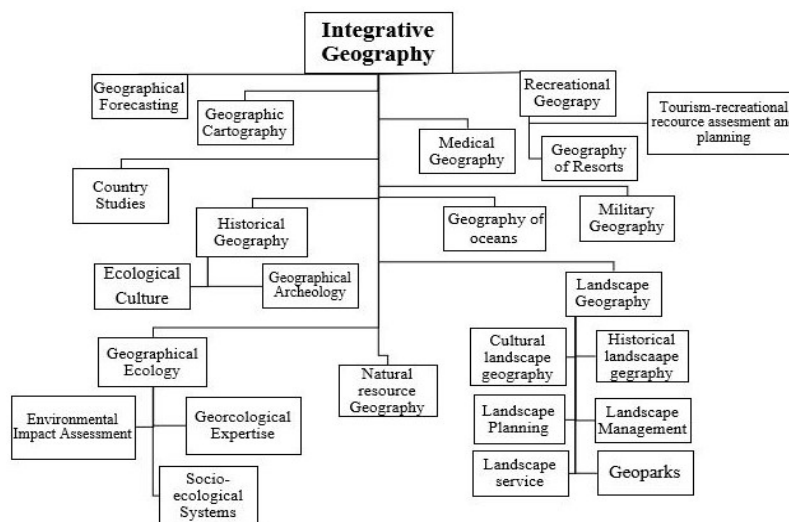
During the last two decades, directions of integrative geography such as landscape geography, landscape planning, military geography, medical geography, environmental impact assessment, recreational geography, etc., have rapidly developed in Georgia. Their research methodology is in the process of formation and is based on the theory and practice of geographical and related sciences (history, culture, military affairs, medicine, ethnography, geography of tourism, etc.).

## **3. Results**

### **Some current issues in integrative geography**

A number of directions of integrative geography (**Figure 2**) require special attention. Among them are medical geography, recreational geography, military geography, etc. In addition, several new directions are emerging, the development of which will further increase the importance of geographical science. They include teaching about the cultural landscape, landscape management, and landscape services (part of landscape studies), geocological expertise, socio-ecological systems,

environmental impact assessment (part of geographic ecology), geographic archeology, and ecological culture (part of historical geography), tourism-recreational resource assessment and planning (part of recreational geography). Separate directions are discussed in various publications published by us [11,13,29,30]. This time we will touch on those new and interesting directions, in the research in which the students and graduates of the Georgian (Integrative) Geography and Landscape Planning Department of Tbilisi State University are actively and successfully involved.



**Figure 2.** Integrative geography—thematic scheme.

(1) Teaching about the cultural landscape. The cultural landscape is the result of a long (historical) and harmonious relationship between man and nature. It is rightly considered an essential part of national heritage as it reflects local culture and identity. It can be related to an important historical event, as well as traditional economic or various social activities.

Through the cultural landscape, it is possible to have an idea of the trends of development of the territory and the utilization of the environment, the potential and ecological features of the landscape, and economic and social values.

Teaching about the cultural landscape (the so-called landscape science) began to take shape at the beginning of the 20th century, which is attributed to the German geographer Otto Schluter. He considered the geographical environment in two forms: natural or original (without human intervention) and as a collection of cultural landscapes. According to him, the main task of geography was the study of the process of transformation of the natural landscape into a cultural landscape.

The vast majority of researchers in this direction agree that:

- 1) The cultural landscape is developed on its natural foundation,
- 2) Preserves the main geographical elements (relief, geological structure, climate, waters, soil, accommodation, communications, etc.),
- 3) Basically (essentially) “submits” to the processes taking place in the natural environment [11].

Thus, the cultural landscape is part of the natural and cultural heritage. It clearly shows the peculiarities of the origin and development of this or that country (territory), the interdependence of man (the local community), and nature. Among the values of

the cultural landscape, the areas related to forms of religion, traditional agriculture, historical places, landscape architecture, and traditional use of natural resources stand out in terms of importance and quantity.

Teaching about the cultural landscape is an essential part of integrative geography. Its development in geography is connected with the synthesis of research methods of natural science and public geography, integration of history and culture, agriculture and architecture, ecology and ethnoculture with geography.

In Georgia, despite several thousand years of statehood and farming history, no territory has the status of a cultural landscape. However, such a status would clearly show the country's public importance. There are dozens of places in Georgia that can be assigned the status of different types of cultural landscapes, the assessment of which is one of the important scientific tasks of the Georgian School of Geography.

(2) Teaching about the historical landscape. The historical landscape consists mostly of historical settlements created in a homogeneous geographical environment. It can be a city or a part of a city, a village or its part, a separate architectural monument, a defensive structure, etc. A historical landscape can be made up of individual buildings, as well as agricultural and recreational infrastructure. A historical landscape can be inhabited or uninhabited, but its architectural and archaeological monuments must clearly reflect the values of the past. Historic landscapes must have national or world value. They represent a clear example of historical development or process, as well as the result of the harmonious coexistence of man and nature. In scientific literature, the historical landscape is also considered a part of the cultural landscape. Historical landscapes can be classified according to different signs (characteristics). Its characteristics are considered: category (landscape of a populated point or its part), age (historical period), importance and identity (national, global), uniqueness (distinctiveness, style), architecture, a form of development, geographical compactness, harmony (in connection with the environment), according to function, degree of protection, scale of natural landscape transformation, and tourist attraction. Part of the listed characteristics is the object of geographical research. Because of this, teaching about the historical landscape should be considered as one of the tasks of integrative geography. Davit Bakuradze, a student at Tbilisi State University, is currently working on his master's thesis: *Historical Landscape: Geographical Foundations of Identification Methodology*. Identifying a historic landscape, especially within its natural environment, requires the integration of a number of scientific disciplines. Among them are the scientific directions of architecture, urban planning, history, archeology, culture, geography, and ecology. Several dozen historical landscapes are represented in Georgia. Their identification and planning should be carried out on the basis of clearly defined principles and methodology. Currently, in Georgia, only the historical capital—Mtskheta—has a UNESCO nomination. It was identified in 2013–2014.

(3) Geographical archeology (geoarchaeology) is an interesting and rapidly developing scientific direction of historical geography. It is a contiguous science of geography and archeology and combines humanitarian (social) and natural science disciplines. In 2021, a master's thesis was prepared for the first time in geographical archeology at Tbilisi State University, which deals with the place and importance of integrative geography in geographical archaeology. Now we can talk about

geographical archaeology, as well as the prospects of establishing an integrative (interdisciplinary) geographical science and its inclusion in the educational process. From a practical point of view, geographic archeology provides a new opportunity to study in more depth the peculiarities of the development and transformation of the geographical environment, the historical economic activity of society and its connection with the natural environment, and the peculiarities of the formation of cultural landscapes. Hopefully, geographic archeology will firmly take its place in the system of geographic sciences and contribute to the development of both integrative geography and archaeology.

(4) Ecological culture is a new scientific direction in geographic ecology, which is one of the main parts of integrative geography. A master's thesis was prepared for the first time on this topic in 2021, which deals with the place and importance of integrative geography in the field of ecological culture research. The task of the research was to study the ecological culture of the mountain population, to determine the different forms of human adaptation to the environment in mountainous regions, the influence of geographical features on the life and economic activities of the mountain population, to reveal the geographical and ecological features of preserving their ethnocultural identity. In this direction, it is important to study and compare the factors affecting the formation of the eco-culture of different peoples and different regions of the world. The topicality of the topic is determined by the trends of climate change, which are manifested in the change in the geographical distribution of many natural zones and landscapes, and in the ability of the population to adapt to new ecological challenges.

#### **4. Conclusion and discussion—Perspectives on integrative geography**

The importance of integrative geography is related to the effectiveness of systematic and synthesis research of geographic objects, geographic events, and geographic processes. Through it, it is possible to analyze and integrate the interconnected characteristics of the geographical environment. They can be imagined as a geographical chain. The main “links” of such a chain are geographical location → components of the natural environment → natural resources → population → economic situation → social situation → ecological situation. Integrative geography is most effective for research and analysis of spatial issues of sustainable development and socio-ecological systems.

The study of socio-ecological systems [31–38] is an interesting and promising scientific-practical task that can be considered an object of integrative geography research. This is especially true for Georgia, where such studies were practically not carried out. Many publications of ethno-cultural content are published in Georgia, although the interdependence of nature and society, the ecological culture of the local population, the history and ethics of environmental protection, ecological economics, etc. are rarely reflected in them. Preliminary studies show that the ecological ethics and traditional ecological knowledge of the mountain population of Georgia deserve a lot of attention. This becomes especially relevant in the background of climate change, when aridization of plain and lowland landscapes, degradation of medium-

mountain forest landscapes, and the tendency to replace alpine grassland ecosystems with forest ecosystems are observed. In mountainous regions, the use of water and forest resources is already problematic, which requires the analysis and application of traditional knowledge and ecological culture. We should consider landscape services and landscape management as perspectives in integrative geography. Both of them are new and very interesting directions in modern landscape geography and landscape planning.

Landscape management is a rapidly developing scientific-practical direction, in which geographers, territorial planning and management specialists, sociologists, urbanists, landscape architects, economists, etc. are engaged. Its essence, first of all, is related to maintaining and ensuring the ecological sustainability of the environment. This refers to the development and management of spatial policies that arise at the local, regional, country, or global level (there are other forms of spatial relations: rural space → urban space → national space).

The ultimate goal of landscape management is the harmonious coexistence of the natural and public environment. It is impossible to achieve such a goal without knowing the natural mechanisms that determine the geographical features of the structure and functioning of the natural environment. On the other hand, public processes and awareness essentially determine the ecological state of the natural environment, which is why the study of the socio-economic situation and community behavior characteristic of this or that place is a necessary prerequisite for landscape management. Thus, landscape management is a multifaceted activity involving scientific, practical (economic), and administrative circles.

A universally accepted methodology for landscape management does not yet exist because it does not have a long history. The foundations of such a methodology are gradually being created, for which specialists from many countries around the world (Sweden, Germany, Switzerland, Norway, Austria, Finland, Australia, Japan, etc.) are especially active. Traditional forms of landscape use and management have a much longer history, especially in Southeast Asia and Europe.

Landscape service refers to the set of actions that the local population takes to maintain its aesthetic and national significance. The appearance of the landscape clearly speaks of the household and ecological culture of the population. Polluted and uncared for, the degraded, and depressing landscape is considered to be an obstacle to the development not only of local residents but also of society.

Only the local population can make the landscape attractive and interesting, healthy and safe, and clean, which also affects their psychological mood and socio-economic activity. For this purpose, great attention is paid to the beautification and purposeful regulation of building facades, gardens, yards, and parks in the settlements of European countries. The local population takes responsibility for landscape services, which is an integral part of European ecological culture.

Many directions of integrative geography are of great importance for the further development of the Georgian school of geography. This is related to the study of the landscape diversity of Georgia, the problems of spatial planning in the country, the tasks of preserving natural and historical-cultural heritage, the formation of new protected areas, the restoration of resort farming, the need to analyze the trends of climate and agro-climatic resource changes, environmental impact assessment, etc.

Thus, many directions of integrative geography can become an essential tool for the analysis of problems related to the sustainable development of contemporary Georgia.

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