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IMPROVING THE MATHEMATICAL AND GEOGRAPHICAL BASIS OF ECOTOURISM MAPS AND THE METHOD OF DEVELOPING THE ESSENCE OF THE CONTENT.

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Abstract: in this article, the method of developing the mathematical and geographical basis of ecotourism maps and the essence of the content is improved. Information about cartographic representation methods, projections, and setting the necessary scale, used depending on the purpose, function and content of the maps created for the purposes of ecotourism, is given.

Keywords: . ecotourism, map, plan, mathematical, geographic, cartographic, scale, generalization, private, local, municipal, regional.

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INTRODUCTION.

According to the reference content in different contexts, only a few concepts can be compared with the term "ecotourism", the variety of existing definitions shows the following examples.

"Ecotourism is a form of ecologically sustainable natural tourism organized in accordance with ethical standards aimed at minimizing environmental impact, consumption and costs (in terms of control, o "advantages of dimensions), usually this form of tourism develops in protected areas, which helps to preserve these areas".

"Ecotourism can contribute to nature conservation and development, it includes at least a positive synergistic relationship between tourism activities, biodiversity and local people, which is supported by the relevant organization and the management of these activities. powered up".

"Ecotourism is tourism

1) occurs in relatively intact natural areas,

2) does not lead to the destruction of the natural environment and deterioration of its quality,

3) contributes directly to the protection and management of natural areas used,

4) subject to sufficient and competent management.

"Planned and organized tourism combined with the enjoyment of nature and knowledge of living creatures in their interactions with the environment [1-4]. This

type of activity does not cause environmental degradation, supports and supports the conservation of natural resources, local creates economic benefits that reach the majority of social groups of the population and contribute to sustainable "horizontal" development. In addition, true ecotourism brings justice for people and nature."

Ecotourism includes three main criteria: the places that attract the main tourists are natural (for example, flora, fauna, geological features), and the following component is the characteristic features of the cultural environment; focuses on the study and understanding of resources, and the activities of tourists and other participants have a soft impact on the physical and cultural environment in the region visited. Ecotourism should be related to the concept of sustainable tourism, should not exceed the recreational potential of the areas visited, should be acceptable to and support local communities."

Of the many definitions of ecotourism, it is the most common in the literature.

Ecotourism or ecotourism is defined by the International Union for Conservation of Nature (IUCN) as environmentally responsible travel through relatively unspoiled natural areas to explore and enjoy natural and cultural attractions that contribute to conservation. , has a "soft" impact on the environment, ensures the active socio-economic participation of the local population and benefits from these activities (Ceballos-Lascurain, 1993a).

The Ecotourism Society (Ecotourism Community) gives a similar definition: "ecotourism is responsible travel to natural areas that helps protect nature and improves the well-being of local people." The definition is also known: "...that violates the integrity of ecosystems and does not create economic conditions in which the protection of nature and natural resources will be beneficial for the local population, in this area the natural and cultural and ethnographic features, relative virginity to get an idea travel in places with nature, including tourism [5-10]. There is also a simple definition: "ecotourism is natural tourism that helps to protect nature" (World Wildlife Fund, Boo, 1990).

Thus, the characteristics of ecotourism stimulate and satisfy the desire to communicate with nature, have a negative impact on nature and culture, and encourage tour operators and tourists to promote nature conservation and socio-economic development.

Also, ecotourism is an important component of sustainable development of natural areas. Most definitions of ecotourism are either the goal of achieving sustainability or a means to that goal, such as "reducing negative impacts on the natural and cultural environment," "increasing economic returns for the benefit of conservation," or environmental education. Therefore, Craig Lindberg (Lindberg et al. 1998) suggested using simple and general conceptual definitions:

Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. PF-4947 "On the Strategy of Actions for the Development of the Republic of Uzbekistan", Decree of the President of the Republic of Uzbekistan on Tourism Development and Cabinet of Ministers No. 450 of 2017-2019 on the measures "Rapid development of the tourism potential of Samarkand city and Samarkand region" and APPENDIX 1 to Decree No. PF-5611 of January 5, 2019, Tourism in the Republic of Uzbekistan in 2019-2025 This dissertation research serves to a certain extent the implementation of the tasks defined in the CONCEPT of development of the field and other regulatory and legal documents related to this activity.

RESULT AND DISCUSSION.

It was found out from the purposeful researches and the analysis of the literature on the subject that the methodology for selecting and justifying the main elements of the content of ecotourism plans and maps has not been fully developed. In this regard, many scientists on the methodology of creating ecotourism maps M. Baransky, K.A. Salishchev, A.N. Berlyant, Yu.S. Bilich, H. Wasmut and others partially approached in their research. In the studies of the above-mentioned scientists, the main attention is focused on fundamental work on mapping, that is, general recommendations on the development of a mathematical basis. The scale of ecotourism maps and plans is limited by the development of the essence of the content, the justification of the stages of generalization [11-15].

In all thematic maps, the first scale is chosen for the detailed and complete representation of the data. Scale selection is one of the main issues in the design of a system of cartographic works for the purposes of ecotourism, and it depends on the content detail, accuracy, public readability, map format and application tasks that are important for ecotourism travel.

Regional systematic mapping showed the need to develop a range of scales in order to integrate ecotourism plans, maps and atlases and achieve their unity.

When designing a scale line, it is necessary to pay special attention to the area and shape of the area to be mapped, the classification of the use of plans, maps and atlases, and the subject. They are explained as follows:

- level of general geographical and thematic elements;
- cartographic territorial units on a private, local, municipal and regional scale;
- by general geographic and thematic content. The scale of topographic maps designed for the development of reflection methods and mathematical and geographical basis is taken into account. The availability and detail of primary information, the possibility of using modern methods and technologies in ecotourism mapping, and other factors are emphasized.

In establishing the optimal system of scale for systematic mapping of the region, each scale-forming factor and the requirements for cartographic works on

the ecotourism theme were studied. It was found out from the conducted research that the following range of scales was accepted as the most optimal option for the creation of plans, maps and atlases for the purposes of ecotourism. The range of scales developed for these ecotourism maps also serves as a program for organizing maps and plans of other regions in this direction. The range of scales was explained as follows:

• 1: 2,000 and larger - for separate ecotourist-excursion and ecotourist infrastructure facility plans;

• 1: 5,000 - 1:20,000 – for sports maps;

• 1: 5,000 - 1:30,000 – for complex ecotourism plans of cities and other settlements;

• 1: 200,000 - 1: 1,000,000 – for maps of passive types of ecotourism;

• 1: 200,000 - 1: 400,000 – for complex ecotourism maps of the region;

1:50,000 - 1:400,000 – for series of complex and network ecotourism maps of the region or its separate parts;

• 1:30,000 - 1:300,000 - 1:1,000,000 - 1:3,000,000 - for the complex ecotourism atlas of the region;

• 1: 5,000 - 1: 100,000 - 1: 200,000 - 1: 1,000,000 - for the atlas of young tourists;

• 1:30,000 – large city GIS as the main scale for ecotourism resource potential;

• 1: 200,000 – regional GIS as the main scale for ecotourism resource potential

Ecotourism cartographic works for the purposes of ecotourism are divided into three types, i.e., wall maps, tabletop maps, and topographical maps [17-19]. Gauss-Kruger equiangular cross-cylindrical projection was found to be the most suitable for creating these cartographic works. When creating ecotourism cartographic works, a cartographic and geodetic basis is first created [20]. This created framework also serves for maps of various other themes.

The selection of general geographic elements for ecotourism maps depends on the scale of the map being created. Cartographic works within the regional system differ in terms of scale, purpose, subject, cartographic harmony, method and means of presenting information. As a result of this differentiation, the selection of general geographic elements also changes [21-23].

Despite the fact that maps are created for different purposes, on cartographic and geographical bases, administrative boundaries and territories, settlements, communication routes, hydrography, in some cases, vegetation-soil layer, relief and other objects are described. Here, it is necessary to pay special attention to one thing, in order to create convenience for tourists, it is appropriate to describe the objects that are of special importance, but are not shown on the scale of the map, without scale [24.].

In the formation of the geographical basis of the maps, it is appropriate to use the same cartographic symbols for the reflection of the borders of the republic, region, districts, recreation zones, reserve areas, and hunting zones.

In ecotourism maps, settlements are one of the main elements of the geographical framework. When creating such maps, special attention is paid to describing biocultural, historical-cultural and socio-economic ecotourism resources [25].

Ecotourism maps (especially for bicycle, motorcycle, car types of ecotourism) show detailed and complete communication routes specific to this scale, separated into railways and highways. Motorways, in turn, are divided into highways, perfectly paved, hard paved, forest and field roads [26]. Railways are given with their intermediate and final stations, railway stations, and their names. The European, interstate and national numbering of the roads, indicating the distance, specifying the routes and bus stops are of particular importance for the classification of the bus network.

Hydrographic objects are connected with other elements of the cartographic image and are the main element of the geographical landscape. In ecotourism maps, hydrographic objects, seas, lakes, artificial reservoirs, rivers, natural and artificial springs, mineral springs should be clearly and reliably reflected. When marking rivers, it is necessary to pay attention to the conditions and objects that are dangerous for the coastline, seabed, currents, water ecotourism. The size of natural water bodies suitable for ecotourism and recreation should also be represented [27].

On ecotourism maps, the names and flow direction of rivers with a reduced level of more than 20 meters (for topographic maps of a certain scale, available rivers are in conventional symbols), water networks, barriers, bridges, holes of routes specific to the type of ecotourism ship, the river such as dynamic classification, characteristics and level of the river bed [28]. The image of natural and artificial springs, mineral water springs is a necessary object in the design of large-scale ecotourism maps.

It is permissible to depict hydrographic objects that are rich in holding such entertainment events on medium and small-scale ecotourism maps. The geographical basis of plans and maps on the topic of ecotourism is defined by vegetation-ground cover forest massifs (deciduous, coniferous, mixed), groves, orchards and orchards, agricultural lands, swamps, sand dunes [1-2]. When representing one or another object of plant-soil cover, their ecotourism, recreation and conservation value, their relation to supporting or hindering factors, anthropogenic influence and other classifications are taken into account.

Relief must be given on the geographical basis of ecotourism maps created for plain regions. In the ecotourism maps of mountainous regions, it is mandatory to

describe the terrain. The character of the relief is horizontal, and individual elements (funnels, eaves, passages, etc.) are displayed with conventional symbols out of scale. The detail of the relief image is useful in ensuring traffic safety [3-4].

CONCLUSION.

When justifying the optimal function of the plans included in the system of cartographic works for the purposes of ecotourism, the selection of general geographic elements of the geographical basis is carried out according to the principles of regional systematic mapping for the purposes of ecotourism.

One of the most important stages in the design of regional systems of ecotourism cartographic works is the development of the content of a series of plans, maps, maps and atlases. In determining its individual elements, it is recommended to use a structural-graphic model that implements the relationship between the complex of ecotourism resources of the area and the indicators of systematic ecotourism cartography.

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