



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2020; 6(5): 317-319  
[www.allresearchjournal.com](http://www.allresearchjournal.com)  
Received: 23-02-2020  
Accepted: 25-03-2020

**Gulmurodov Farrukh Eshmurodovich**  
Senior Teacher of Student of Samarkand State Architectural and Civil Engineering Institute, Uzbekistan, India

**Yarkulov Zokir Rakhmanovich**  
Teacher of Student of Samarkand State Architectural and Civil Engineering Institute, Uzbekistan, India

**Pulatov Asliddin Sayfullaevich**  
Student of Samarkand State Architectural and Civil Engineering Institute, Uzbekistan, India

**Correspondence Author:**  
**Pulatov Asliddin Sayfullaevich**  
Student of Samarkand State Architectural and Civil Engineering Institute, Uzbekistan, India

## Mathematical and geographical basis and content development of tourism cards of Samarkand region

**Gulmurodov Farrukh Eshmurodovich, Yarkulov Zokir Rakhmanovich and Pulatov Asliddin Sayfullaevich**

### Abstract

**Annotation:** The role of tourism and tourism cards in promoting the country and the region to the world and developing its economy is great. Nowadays, tourism cards and schemes are becoming more and more advertising brochures and are the main product that shapes and develops the tourism image of the region. This article analyzes cartographic works, identifies modern tourist mapping trends and experiments, improves the methodology of creating systematic maps for regional tourism, creates cartographic works for tourists and travel organizers, expands the completeness and detail of maps geography and content, plans, maps and information on the selection of scales for atlases is given.

**Keywords:** Tourism, plan, map, atlas, cartographic work, tourist map, cartographic image, projection, mathematical basis. geographical basis, scale, complex map, series of cards, network cards.

### Introduction

Currently, due to the active development of the tourism industry in the world, the demand for tourist plans, maps and atlases has increased significantly. The essence of these cards, the variety of themes that can be reflected in them, the wide range of consumers of different ages, all this requires a lot of work on its content and equipment. Tourist maps are the most popular type of product for a wide range of consumers of cartographic production. They are published by manufacturers from different countries, differing in type, appearance, scale, regional coverage, size. Today, special attention is paid to the conduct of targeted research aimed at developing and implementing the mathematical and geographical basis and content of systematic tourism maps.

At present, the country is taking comprehensive measures in the field of geodesy and cartography, in particular, the use of cartographic and modern methods in the development of mathematical and geographical basis and content of system maps of tourism in Samarkand region.

Decree of the President of the Republic of Uzbekistan dated December 2, 2016 "On measures to ensure the accelerated development of tourism in the Republic of Uzbekistan", President of the Republic of Uzbekistan dated February 7, 2017 No PD-4947 "On action strategy for further development of the Republic of Uzbekistan" Resolution of the Government of the Republic of Uzbekistan dated August 16, 2006 No PD-3217 "On priority measures for the development of tourism in 2018-2019" This research is aimed at implementing the tasks set by the Decree of the President of the Republic of Uzbekistan dated February 3, 2018 No PD-5326 "On additional organizational measures to create favorable conditions for the development of tourism potential of the Republic of Uzbekistan" and other regulations related to this activity. the work serves a certain degree.

### Research methods

Geographical comparison, cartographic, mathematical, systematic approach, historical and other methods were used in the research.

The degree to which the problem has been studied. Methods of creating cartographic works for tourism purposes and the general state of mapping NN Baransky <sup>[1]</sup>, A.M. Berlyant <sup>[2]</sup>, Yu.S. Bilich <sup>[3]</sup>, A.S. Vasmut <sup>[3]</sup>, K. A. Salishchev <sup>[5, 6]</sup> and others <sup>[4]</sup>.

However, in the literature, little attention is paid to the content of tourist plans and maps,

The methodology of selection of elements of the mathematical and geographical basis. The main purpose of this work is to fill the above gaps.

### The main part

The development of a system of catalog works for tourism purposes is carried out by determining the purpose and function of the created maps, the cartographic image and projections used in it, as well as the necessary scale. Fundamental work on mapping reflects the development of a mathematical framework, general recommendations, scale of maps, accuracy on maps, development of the essence of the content, stages and principles of generalization. Scale selection is one of the issues in designing a tourism card system, which depends on the content detail, accuracy, readability, card format and ease of use that are important for a tourist trip. Regional systematic mapping requires the development of a tourism plan, a combination of a map and an atlas, a scale series in order to achieve a unity of hierarchical level cartographic works and different hierarchical level cartographic works. The size and shape of the area to be mapped when designing the scale range; the classification and subject of use of the tourist plan, map and atlas are taken into account; the level of general geographical and thematic elements of the content; private, local, municipal and regional territorial units of cartography; methods of reflecting general geographical and thematic content, ease and visibility of the scale of topographic maps designed to develop a mathematical and geographical basis, availability and detail of primary information, access to modern methods and technologies in tourist mapping and other factors are taken into account.

In the experimental substantiation of the optimal scale system for regional systematic mapping, the sum of the factors that shape each scale and the requirements for cartographic works on the tourist theme should not be overlooked. Based on this, the following scales are proposed for plans, maps and atlases for tourism purposes:

- 1: 2,000 and larger - plans of separate tourist-excursion and tourist infrastructure facilities;
- 1: 5,000 - 1:20,000 - in sports tourism;
- 1: 5,000 - 1:30,000 - complex tourist maps of cities and other settlements;
- 1:50 000 -1: 200 000 - route maps of active types of tourism;
- 1: 200 000 - 1: 1 000 000 - passive types of tourism cards;
- 1: 200 000 - 1: 650 000 - complex tourist maps of the region;
- 1:50 000 - 1: 650 000 - series of complex and network tourist cards of the region or its separate parts;
- 1:30 000 - 1: 650 000 - 1: 1 000 000 - 1: 3 500 000 - for a complex tourist atlas of the region;
- 1: 5 000 - 1: 100 000 - 1: 200 000 - 1: 1 000 000 - for atlas of young tourists;
- 1:30,000 - as the main scale for the metropolitan GIS tourism resource potential;
- 1: 500,000 - as a key scale for the region's GIS tourism resource potential.

It is advisable to create regional wall and table maps for tourism purposes in the Gauss-Krueger equilateral transverse-cylindrical projection used in the creation of

topographic maps, which in turn is recommended for the geographical basis of the proposed tourist maps.

### Geographical basis and content

Scientific substantiation of the selection of elements of tourist maps provides a systematic approach to reflecting the structure of tourist resources on the map, including a detailed study of cartographic indicators of the creation of this model, the separation of nearby objects on different tourist maps; leads to the identification of generalization requirements to prevent too much or too little data. One of the main features of the regional plan, maps and atlases is the reflection of general geographical and content elements with maximum accuracy, detail, as the data of cartographic works are aimed at finding a way in an unfamiliar place, choosing a route, overnight locations and location objects.

Topographic maps fully meet the listed requirements, the cartographic essence of which is used in the creation of the geographical basis of tourist maps. The choice of general geographical elements depends on many factors, the most important of which is the definition of scale and tourist map. Cartographic works included in the regional system differ in scale, purpose, theme, cartographic unit, method and means of presenting information, resulting in a change in the choice of general geographical elements. However, in any case, the geographical basis includes the boundaries and territory, settlements, communication routes, hydrography, in some cases the vegetation-soil layer, relief. In this case, its elements can be incorporated into the essence of the content in a particular case (for example, communication lines for motorists on the cards).

The administrative-territorial division must have the borders of the republic, regions, districts, including recreational zones, protected areas, hunting grounds.

Settlements are one of the key elements of the geographical basis. They accumulate the largest number of biocultural, historical-cultural and socio-economic tourist resources. Administrative significance of settlements (capital of Uzbekistan, regional centers, district centers), type of population (urban, urban-type settlements, rural settlements), population of cities (more than 1,000,000, from 500,000 to 1,000,000, 100 000 to 500,000, 50,000 to 100,000, 10,000 to 50,000, less than 10,000), urban-type settlements (more than 10,000, 2,000 to 10,000, 2,000); we propose to classify according to rural settlements (more than 1,000, less than 1,000 people). Their external boundaries, areas (sometimes buildings), and key crossings between settlements are important.

It is recommended that tourist maps (especially for bicycles, motorcycles, and types of tourism) show detailed and complete communication routes, divided into railways and highways, specific to this scale. Highways, in turn, are divided into highways, perfectly paved, hard-surfaced highways, forest and field roads. It would be expedient to designate the railways with intermediate and final stops, stations, their names; of particular importance for the classification of the railway network are the European, interstate and national numbering of roads, indication of distance, bus routes, bus stops.

Hydrography is a key element of the geographical landscape associated with other elements of the cartographic image. It would be desirable to show seas, lakes, artificial reservoirs, rivers, natural and artificial springs, mineral springs on the tourist maps with hydrographic objects. When identifying

rivers, it is necessary to pay attention to the coastline, seabed, streams, conditions and objects that are dangerous for water tourism. The size of natural water bodies suitable for tourism and recreation should also be expressed. Tourist maps include rivers with a lower level and a width of 20 meters or more (rivers available for topographic maps of a certain scale are in symbols), their names and direction of flow, water networks, barriers, bridges, ship-type routes for tourism, dynamic classification of rivers, river bed features and levels etc. are reflected. The image of natural and artificial springs, mineral springs is a necessary object in the design of large-scale tourist maps. The most important water resources can be shown on medium and small scale tourist maps.

The geographical basis of the plan and maps on the tourist theme is marked by vegetation-ground cover forest massifs, orchards, gardens and orchards, agricultural lands, swamps, sands. In the representation of certain objects of vegetation-ground cover, their tourist, recreational and conservation significance, attitude to auxiliary or obstructive factors, anthropogenic impact and other classifications are taken into account.

Tourist maps of flat areas must be geographically based on relief, and tourist maps of mountainous areas are mandatory. The character of the relief is horizontal, while the individual elements (funnels, cornices, passages, etc.) are represented by symbols outside the scale. The detail of the relief image must be ensured by traffic safety. In substantiating the optimal function of the plans included in the system of cartographic works for tourism purposes, the selection of general geographical elements of the geographical basis is carried out in accordance with the principles of regional systematic mapping for tourism purposes.

One of the most important stages in the design of regional systems of tourist cartographic works is the development of the essence of the series of plans, maps, maps and atlases.

The complete display of the essence of the content, the unity of the format of the main card, cut-out card, table, text, tourist plans, maps and atlases, ease of use and layout depends on the structure, which is a creative process. In turn, a set of cards depends on its purpose, content, projection, scale, area occupied, mapping, shear card size, classification of card usage, completeness and detail of the legend (in most cases with the definition of monuments). The series of plans, maps, maps, and atlases that make up the regional system of cartographic works for tourism purposes differ in these characteristics and therefore cannot have the same, unique structure. Its uniqueness is first determined by the use of the card.

Poster tourist maps are provided in a large format, with additional elements (texts, illustrations, graphics), along with a cartographic image. Tourist cards used on the table can be both one-sided and two-sided.

Folding tourist cards are folded on the inside. If the area or route is too long, the tourist card is presented in the form of a brochure. The cartographic image is given on its surface, on the back or on both sides of the tourist route sections. In this case, the artistic part completes the content of each folding page of the card, reflecting its area.

A cartographic image with a small volume of additional elements draws attention to the main essence of tourist maps. In most cases, the map features colorful photographs depicting simple legends, sometimes natural landscapes, historical monuments, and so on.

## Conclusion

It is expedient to use structural-graphical modeling in determining the general geographical and content of regional cartographic works. The geographical basis of the maps should reflect the boundaries of the state, region, administrative districts, settlements, communication routes, hydrographic network (in some cases, vegetation and soil layer, relief). The content of tourist cards should include the following tourist and excursion routes, recreation areas, areas of promising development of each type of tourism, architectural monuments, museums, theaters, religious buildings, educational institutions, hunting grounds, tourist organizations, tourist accommodation and other groups. This is important in the design and development of a system of tourist potential and tourist card acquisition indicators of the region.

The project of the regional system of cartographic works for tourism includes a comprehensive tourist map of the region (scales 1: 200 000, 1: 650 000), tourist plans of settlements (scales 1: 5 000, 1: 30,000), active types of tourism (1:50 000, 1: 200 000 scales) and passive types (1: 200 000, 1: 1 000 000 scales) route maps and sports tourism maps (1: 5 000, 1: 20 000 scales), plans of separate objects of tourism and tourist infrastructure (1: 2000 and larger scale), complex and network tourist card series (1:50 000, 1: 650 000 scale), region GAT tourism resource potential on the island (1: 500 000 base scale), GAT tourism resource potential in the big city (1:30 000 base scale), complex tourist atlas (1:30 000, 1: 650 000-1: 1 000 000, 1 : 3,500,000 scales) should be provided for the Young Tourist Atlas (1: 5,000, 1: 100,000, 1: 200,000, 1: 1,000,000 scales).

## References

1. Baransky NN. Economical geography. Economic cartography. - M.: Geografiz, 1960, 452.
2. Berlyant AM. Cartography. - M.: Aspect Press, 2001, 336.
3. Bilich YuS, Vasmut AS. Tourist maps and schemes // design and mapping: Universities. - M.: Nedra, 1984, 312-313.
4. Guide to the creation of tourist overview and route maps. - M.: GUGK, 1989.
5. Salishchev KA. Principles and objectives of system mapping // System mapping of natural and socio-economic complexes. - M. 1978, 481-489.
6. Salishchev KA. Cartography. 3rd ed. - M.: Publishing House of Moscow State University, 1990, 400.