

Due to the variety of trans-border cooperation forms and diversity of their functions only system methodology which has strong applied research equipment can transform the trans-border cooperation study from a descriptive to practically needed modus. This implies that

the trans-border territories mapping has to acquire the systemic features that currently are not inherent to it.

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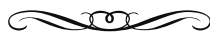
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NATURAL, HISTORICAL AND CULTURAL HERITAGE AS A MAPPING OBJECT

This paper studies the theoretical and methodological foundations and approaches to regional mapping of natural, historical and cultural heritage. The main objects and parameters of heritage mapping are examined. The principles to develop regional heritage cartographic products have been revealed.

Keywords: natural, historical and cultural heritage, thematic mapping, mapping principles, the system of regional maps.

К.В. Шпурік

ПРИРОДНА ТА ІСТОРИКО-КУЛЬТУРНА СПАДЩИНА ЯК ОБ'ЄКТ КАРТОГРАФУВАННЯ

Дана стаття присвячена вивченню теоретичних і методологічних засад і підходів до регіонального картографування природної та історико-культурної спадщини. Розглянуто основні об'єкти і параметри картографування спадщини. Розкрито принципи розвитку регіональних картографічних творів спадщини.

Ключові слова: природна та історико-культурна спадщина, тематичне картографування, картографічні принципи, система регіональних карт.

Е.В. Шпурик

ПРИРОДНОЕ И ИСТОРИКО-КУЛЬТУРНОЕ НАСЛЕДИЕ КАК ОБЪЕКТ КАРТОГРАФИРОВАНИЯ

Данная статья посвящена изучению теоретических и методологических основ и подходов к региональному картографированию природного и историко-культурного наследия. Рассмотрены основные объекты и параметры картографирования наследия. Раскрыты принципы развития региональных картографических произведений наследия.

Ключевые слова: природное и историко-культурное наследие, тематическое картографирование, картографические принципы, система региональных карт.

Introduction. Information transfer to future generations was, is and always will be a topical problem of social development of any country, especially a young country, which intends to take a worthy place in the cohort of the developed, open and visited countries in the world. Under these conditions, illustrative, accessible, well-known methods for informing the public about the objects that may be interesting to visit and constitute the pride of a territory deserve special attention. The matter is to discuss the use of a cartographic mapping method to represent natural, historical and cultural heritage (NHCH). Its task is to provide information on heritage sites, to predict their future conditions and possible ways of use. Cartographic products representing heritage are examined as decision-making tools to increase public awareness of the unique objects.

Premises. Mapping of NHCH is developing within different areas of thematic cartography, including tourism and conservation areas. The methodological basis for NHCH mapping comprises theoretical and applied developments in heritage mapping, tourism and recreational geography contained in the works of Ukrainian and foreign scientists (K.A. Polyvach, A.A. Beydyk, Y.A. Vedenin, A.I. Elchaninov, A.A. Lyutyi, Y.I. Prasul, V.V. Sveshnikov, R.Y. Shevchenko, and others), as well as experience of creating maps (schemes) of heritage sites location.

In Ukraine an algorithm of socio-geographical research of heritage has already been proposed and applied. It includes a mapping stage and justifies the concept of atlas «Ukraine cultural and natural heritage» creation and possible series of maps, sections of maps of different spatial levels and individual maps to ensure the mapping support of research and to solve a problem of natural and cultural heritage of Ukraine [1].

Although the presence of cultural monuments and natural reserve fund is a mandatory theme of tourist and conservation maps, the elements of natural, historical and cultural heritage they provide are often separated and not shown in their entirety. There are fewer comprehensive cartographic products which reflect the natural, historical and cultural heritage of a separate region. The scientific cartographic literature does not cover general principles of a regional system of NHCH cartographic products design.

The aim of the paper is to present the natural, historical and cultural heritage as a mapping object, to study methodological approaches and principles of development of regional mapping products showing NHCH and to determine the tendencies of heritage mapping.

Research statement. The process of cartographic products of natural, historical and cultural heritage

creation begins with the detection and investigation of a mapping object. Different approaches to heritage classification should be considered: legislative (based on the classification of the Law and legal acts) and scientific (based on the classifications developed by the leading scientists).

For a long time the natural, historical and cultural sites have been considered as separate objects. In Ukraine the current component structure of the heritage applies only to cultural objects and is defined by the Law of Ukraine «On Protection of Cultural Heritage»; there are no special acts regarding the objects of natural heritage. According to the law there are objects of Nature Reservation Fund (NRF), which according to the Law «On the Nature Reserve Fund» are considered only a part of the natural areas and sites under special protection. As the objects of natural reserve fund have a unique value and play an important role in preserving the environment, we can assume that the protected areas make up the natural heritage. Thus, it seems sound that the existing classification of areas and protected areas in Ukraine based on the Law «On the Nature Reserve Fund of Ukraine» is used.

Specific issues concerning mapping of monuments of nature, history and culture gradually appear in the works of Ukrainian scientists in the field of tourism and recreational geography, environmental mapping (O.O. Beydyk, Y.I. Prasul, V.F. Severynov, D.Y. Vortman, V.V. Vechersky, V.A. Gorbyk, and others) [4].

To sum up the various aspects of heritage studies, we conclude that there is no comprehensive approach to the study of natural and cultural heritage, which is characterized by the transition from the protection of individual monuments to preservation of the heritage in view of its integrity and diversity. Thus, the main principle of heritage mapping is complexity. That provides demonstration of NHCH as a single system, involves the study of many aspects of heritage (spatial location, condition, use, etc.). In addition, the complexity of heritage mapping focuses on the study of its various types (historical, cultural and natural), their combinations and interactions.

Mapping of cultural heritage objects K.A. Polyvach regards as the four territorial levels [1]:

1. Global — Ukrainian population is shown at a global level. These maps, which reflect Ukraine's place in the cultural and natural heritage of Europe and the world, show the location of the greatest cultural heritage monuments of the Ukrainian diaspora;

2. National (domestic) — characteristics of various types of Ukrainian heritage, cultural and landscape

zoning, historical and cultural framework of Ukraine, etc. are provided;

3. Regional – should be used when representing the location of cultural and natural heritage of the Crimea, administrative regions, cities of Kyiv and Sevastopol;

4. Local – presentation of objects and areas that at the mentioned above levels are depicted as markers or other non-scale conventional signs. The examples include plans of the cities, maps and plans of the heritage (historical, cultural, natural, biosphere reserves, national parks, open-air museums, places of worship, monasteries, etc.).

It is often outlined that there is a need to establish cartographic products showing national heritage. In particular, the content of the Atlas of Cultural and Natural Heritage of Ukraine has been prepared by I.A. Pidlisetska, C.A. Polyvach, V.S. Yatsenko. Also a content of series of small-scale maps «The Cultural Heritage of Ukraine» (I.O. Pidlisetska) and classification of special maps for the study and preservation of historical and cultural monuments (S.B. Khvedchenya) has been developed.

Availability and thematic content of the heritage maps in «The National Atlas of Ukraine» (published in 2008) indicates a significant step forward made by Ukrainian scientists demonstrating their efforts on increasing the role of heritage. Thus, in Ukraine mapping of NHCH is occurring at the national level, but at regional and local levels any sufficient theoretical or practical approaches have not been proposed yet.

As measures to identify, protect and preserve the heritage are held within the administrative units, a regional approach acquires significant importance. In addition, it is also evident that the concentration of NHCH objects within the country and region areas is heterogeneous.

The systemic approach to NHCH mapping is evident at all stages of the study (from the problem statement and the task to create a cartographic product to justification of its application) through consistency of mapping objects; information foundations of the study; process of creation and use of the maps.

The use of the system approach in a process of NHCH objects mapping involves the use of a modeling method because it shows clearly and in detail not only a structural organization, but also a substantial component of any cartographic product. As a result, structural and logical models help to study mapping objects in detail [2]. The first step in identifying the main features of the natural, historical and cultural heritage as a mapping object is a structural and logical modeling which allows to identify the main groups of heritage, including state classification and the views of historians and art scientists (Fig. 1).

Thus, all classification features of NHCH can be mapped. According to the 8 signs, there are 26 indicators that can be combined and grouped into separate maps.

The idea to develop the theory of natural, historical and cultural areas, facilities and systems mapping as a

part of thematic mapping is defined in many works and based on the needs of the government and local authorities to get operational, accessible, structured information for the purposes of knowledge, protection, conservation, use and development of natural, historical and cultural heritage. Therefore, there is a need to create basic mapping products that will form a regional system. This system will include: a comprehensive atlas, series of maps (two kinds) and separate maps with the same system of scales and projections, a consistent thematic content (heritage classifications), the unity of the principles of generalization and general design tools. However, each type of heritage mapping products has different design features.

Separate maps by implication reflect the natural, historical and cultural heritage mapping most accurately. They characterize the region with respect to availability of natural and cultural monuments; represent information about the total number, structure, and concentration of heritage sites within the area.

Series of maps can be grouped in two ways: by the monuments' type and the administrative-territorial units. So, the first group includes 5 series of maps: «The Archeological sites» series; «The Monuments of History» series; «The Architecture and City-Building» series; «The Sites of Monumental Art» series; «The Natural Heritage Monuments» series.

The second group includes series of 33 maps of Kharkiv region (according to the number of districts and towns of regional subordination). Each of these series includes four maps in scale 1:250 000, namely «The Archeological Monuments», «The Historical Monuments», «The Architecture and Monumental Art», «The Natural heritage monuments».

All maps have A4 size that makes them compatible with «The Natural, Historical and Cultural Heritage of the Kharkiv Region» atlas. It is the comprehensive regional atlas which provides the most complete set of cartographic characteristics and spatial information about the natural, historical and cultural heritage of the region.

After studying the experience of NHCH objects mapping, it has been revealed that the basis for structuring the content of the atlas should become a classification of NHCH, and the characteristics of all types of real objects should be an important part of the thematic content of the atlas maps [2].

Theoretical research and practical developments have allowed to develop recommendations for the creation of mathematical elements and geographical basic maps of regional natural, historical and cultural heritage and establish their main parameters (scale, projection, etc.). Considering the principle of integrity, the atlas requires a minimum number of projections and multiple scale maps of the minimum quantity. For cartographic products representing regional or local level it is a priority to use a scale of national topographic maps (1:10 000 – 1:1 000 000). In this regard, the atlas uses the following scales: Ukraine – 1: 15 000 000; Kharkiv

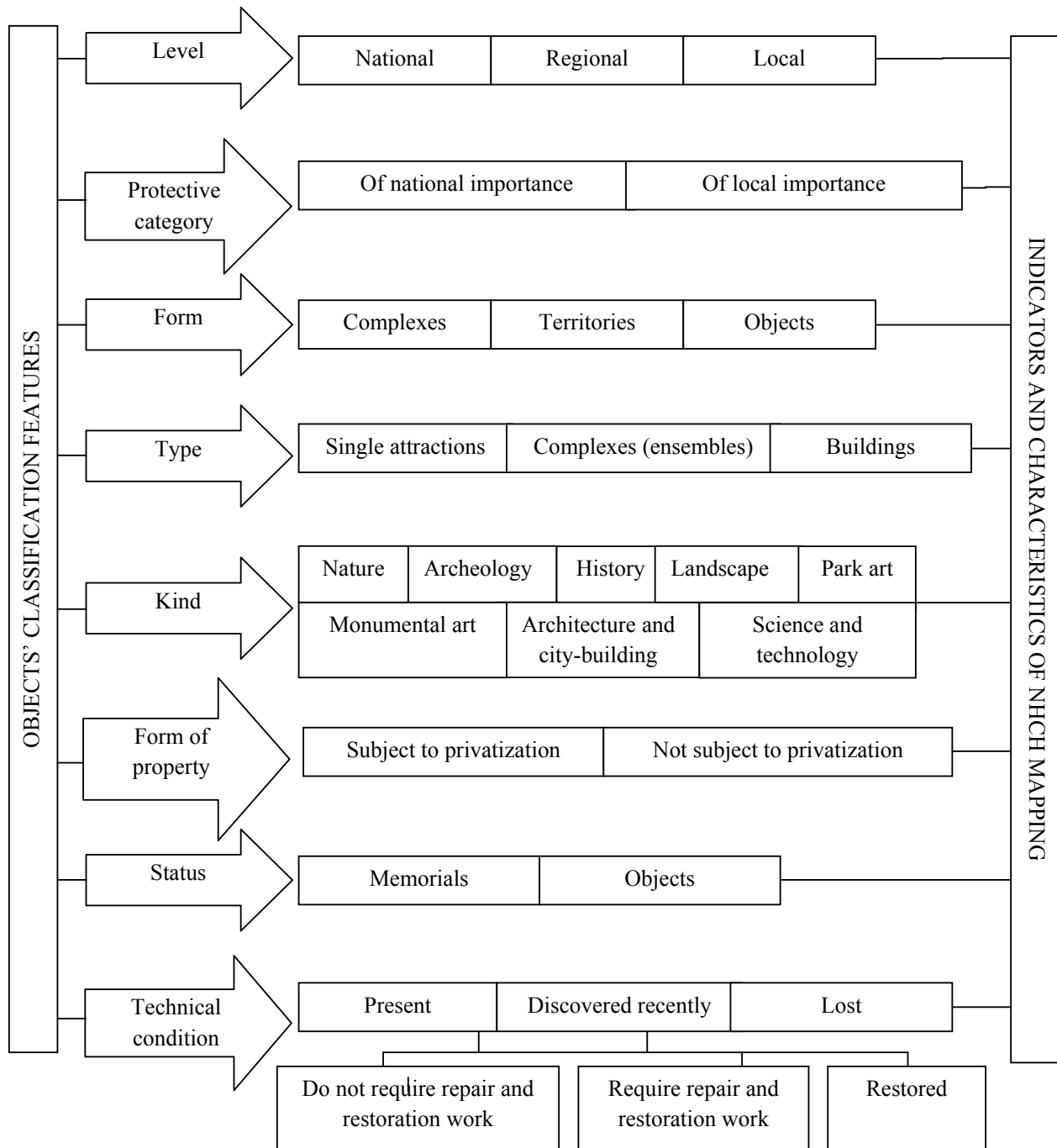


Fig.1. Classification of the natural, historical and cultural heritage as a mapping object

region – 1:1 500 000; administrative districts of the region – 1:250 000 (1:300 000 for Volchansky and Balakleysky regions as the largest districts), a town of regional subordination – 1:100 000, Kharkiv – 1: 150 000; districts of Kharkiv – 1:50 000. The scale model is consistent with the choice of the atlas format (30 x 21 cm – A4) and the design of standard atlas pages' configurations.

This approach to the choice of cartographic products' scale provides the basic conditions for the design of large-scale series – the possibility of matching maps and convenience of transition from one scale to another.

A prerequisite for the design of a regional system of cartographic products should be unification of their content and structure. It is vital to stick to the inner unity of cartographical products of one territorial level by unifying maps' legends; lists of map series or atlas; consistency of mathematical and geographical bases; general approaches to the generalization of the contents of maps; and a list of additional supporting elements (charts, graphs, text, illustrations, etc.) [3].

So, the following methodological rationale for regional mapping of NHCH is proposed and includes the following principles:

– Systematic approach – creation of mandatory multipurpose mapping products – a single map, a series of maps and an atlas, each according to its purpose and scope as fully reflecting the natural, historical and cultural heritage objects as possible; monuments' protection measures and the extent of their use for each administrative-territorial area (region, district, and town);

– Scientific rationale which involves the use of already accumulated experience of heritage mapping, and well-known and proven methods and techniques of mapping.

– Cutting-edge approach, which involves the use of relevant and available data in order to provide regional public administrations with the required up-to-date mapping information;

– Representativeness of information – provides novelty and authenticity of cartographic products, the use of advanced techniques of maps' construction and design.

The study of history, international experience, generalization and exposure of the conditions of mapping in Ukraine, as well as analysis of the achievements of domestic and foreign mapping developments, determines the following mapping trends concerning NHCH as an object of interest:

– Integration of databases of objects into a single informational space (creating web-GIS for natural, historical and cultural heritage).

– Development of scientific basis of heritage mapping and its practical implementation.

– Identification of the requirements, areas and features of cartographic heritage maps design that should form an integrated system (selection and classification of objects, scale, functions of mapping, the forms of information presentation, etc.).

– Expansion of topics of thematic heritage maps.

– Development of unified map symbols for heritage maps under the provisions of cartographic theory.

– Addition to the heritage maps accompanying material, e.g. illustrations and text descriptions.

– Creation of cartographic products using several languages, apart from the national one.

Conclusions. It is stated that the system of NCHC should include both natural, historical and cultural heritage objects. The classification attributes of NCHS objects using scientific and legal approaches are determined based on their corresponding indicators and mapping features. Thus, all the features of NHCH can be mapped.

The necessity to develop a regional system of cartographic products of natural, historical and cultural heritage and create regional level maps is established. Such maps will show different sides of NCHC objects, fully disclose their classification, will allow to better understand the nature of the problems and help to find the ways to solve them.

The methodological basis of cartographic mapping of natural, historical and cultural heritage entrusts the system of principles: scientific relevance, systemic approach, modernity, information representativeness. Their combined use forms the concept of NCHC mapping which contains the main concepts and terminology of the research, the content and the purpose of maps, special requirements.

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