

STUDY OF THE FUNCTIONAL INTEGRITY OF THE RIVER BASIN WHEN ASSESSING THE NATURAL RECLAMATION CONDITIONS OF IRRIGATED AREAS

Tazhiev Kudrat Kodirberganovich

Urgench State University, Lecturer at the Department of
Geodesy, Cartography, Geography,
qudrat_0278@mail.ru

ANNOTATION:

The article discusses the theoretical foundations of the system method in the study of the natural reclamation conditions of delta irrigated areas.

The study and assessment of the natural reclamation conditions of irrigated lands in delta geosystems requires the identification of a single whole, which unites soil-geological bodies, using topographic maps using satellite images. In our opinion, such a territorial integral unit can be a basin of one-sided system-forming flows of any order. The basins of systems of systemic flows of different ages within the irrigated areas form the functional integrity of the collector.

INTRODUCTION:

When assessing the natural reclamation conditions of the lower reaches of the Amu Darya, we used the basin method of relief plastics as an element of the application of a systematic approach in physical geography. This systemic method is based on identifying the functional integrity of the object, that is, the spatial ordering of the relief structure, the nature of the spatial: changes in the material composition of the reclamation swell within the reservoir basin and the spatial relationship between structures and processes.

Having studied the principles of the systematic approach, we came to the conclusion about the differentiation of the earth's surface in the Lower Amu Darya by reservoir basins. Dividing the territory according to the functional-integral principle

allows studying these basins by the landscape-halogenochemical method, which provides for the analysis and assessment of the direct-reclamation state of the collector basins based on changes in the salinity and qualitative composition of surface waters at the closing gauging station of the collector. The results of such a study reveal the main factors in the change in the ameliorative state of irrigated lands, that is, they make it possible to determine the relationship of landscape components within a particular reservoir basin.

The study and assessment of natural reclamation conditions within the reservoir within the reservoir is of particular interest. The collector basin is one of the most common types of functionally integral geosystems within irrigated areas. Such a powerful integrating factor as a constant surface and underground water flow directed along a positive relief is one of the most versatile builders of delta geosystems of the geographic envelope. The peculiarity of the internal structure of the collector basin. And the formation of morphological structures. Landscapes are associated with processes of water flows; therefore, the morphological structure of elementary landscapes and the internal structure of the collector basin clearly reflect the directions of systemic flows. IN Stepanov (1986) noted the importance of studying the relationship between soil forms in delta territories and the activity of surface streams. As we can see, in recent years, interest in runoff processes has again increased, the role of which in the

formation of deltaic soils is irreplaceable. The separation of soils from the environment leads to the creation of scholastic schemes.

SD Muraveisky (1948) drew attention to the importance of the analysis of runoff processes as a geographical factor. He pointed out that "without transport, without movement, there can be no movement, there can be no mutual connections, interactions. And this most important role of transport, the movement of matter on the earth's surface, falls primarily and mainly on the process of runoff. "The role of runoff as a geographical factor in deltaic conditions is most clearly manifested in the formation of small deltas of different ages. It also affects the input-salt regime and the lithological-mechanical composition of soils, the chemistry of surface, groundwater, etc.

It should be noted that runoff is of great importance in defining the boundaries of geographic complexes, in this case in defining the boundaries of the reservoir basin. The establishment of the boundaries of natural objects is mainly determined by abrupt changes in the migration routes of salts, their qualitative composition, disturbances in the circulation of substances, and in these changes, runoff plays an important role. It is also important to know the meaning of flow from a systemic perspective. A.Yu. Reteyum (1971) notes that the main methodological tool for dividing the earth's surface of the systematic approach under consideration is the analysis of flows, which is explained by their role in geosystems. However, this does not mean the absolutization of their meaning: the flow not only does not stand above the system, but it is itself its product, its creation.

The systems approach has already won quite a few supporters in the geographical areas of science. The study of the collector basin as a functional integrity makes it possible to focus on the analysis and assessment of the

systemic organization of the natural reclamation conditions of irrigated areas. The positive side of the system approach is due to the fact that the reservoir basin has a clearly defined border, viewed by us as geosystem, it opens the possibility of studying the following systems: Hydrologists - iCal (irrigation-melioration network and their orders, the relationship of surface and ground water, and others.), Geomorphological (dynamic combination of positive and negative landforms, orderly patterns of the land surface, etc.), soil (combination of soils by relief elements, its role in the formation and development of soils in general, etc.), etc. At the same time, the results of this approach with the help of the method of relief plastics, they can be actively introduced into system and thematic mapping in geosciences.

The objectivity of the division of the earth surfaces of the lower reaches of the Amu Darya into reservoir basins according to the principle of functional integrity ensures the applicability of a systematic approach to solving various problems, both scientific and practical. It provides a natural basis for the development of projects for the optimization of natural reclamation zoning of irrigated lands due to the integrity of geosystems (collector basin) and their ability to act as a basis for the construction and reconstruction of irrigation and meliorative systems.

The development of scientific research in recent decades shows that in the systems approach, the category "structure" is of great importance, and not the category "system". Only by identifying and studying the structure can one "find" the system and constructively explain its functional integrity. Based on this, the urgency of the problem is that with the structures or intra-basine differentiations of the earth's surface, the material composition of geographic complexes is interconnected. The solution of

this problem in deltaic conditions is especially necessary, because here there are spreads of a shallow delta, upland and sandy territories, which differs in its genesis and internal structure.

The use of the relief plastics method in displaying intra-basin differentiation and ordering by the relief shape of small deltas opens up great opportunities for the transition to the study of the spatial ordering of the structure of the earth's surface of the reservoir basin. It is important to emphasize here that the functional integrity of the reservoir basin. It is important to emphasize here that the functional integrity is an aggregate and interconnection of small deltas of different ages. This allows us to pay attention to the study of the ordering of the patterns of the earth's surface of small deltas. The criterion for their orderliness is the existence of each small delta as a part of the whole, that is, each small delta (geosystem) has an origin, a middle, and end parts. Let's turn to a specific example: the origin of coordinates of the modern Amu Darya delta is its summit near the town of Takhiatash, the delta ends in the coastal waters of the Aral Sea. The beginning of the Uldarya delta is located near the town of Khojeyli, and the middle is in the area of the town of Kungarad. These parts of the system differ from each other in their internal structures.

The concept of structure has long been used in physical geography and constitutes the legal property of all its paradigms (geocomponent, geocomplex, ecological and geostructural paradigms). An analysis of the many existing definitions of this term leads to the conclusion that the structure is understood as the relationships and relationships between the elements of the system.

One of the most important problems in physical geography and geomorphology is the problem of the emergence, formation and

development of the earth's surface or geographical complexes of delta geosystems or, which is the same thing, the functional integrity of the lower reaches of the Amu Darya. In the formation of geographic complexes, geographic factors are of great importance - climate, runoff and relief, or more precisely, the climatic process, the runoff process and the process of relief formation. According to S.D. Muraveisky, the runoff process, as a geographic factor, was discovered very recently. The main role of the process flow in relation to the formation of the earth's surface is that the flow is stately "culprit" in the formation of the tree "structures of small deltas and de ferentsiatsii earth's surface pool collector. This suggests that the "branching" structures of small deltas are the product of the runoff process.

The content of intra basin differentiation or ordering of the structure of small deltas is revealed in the history of the development of the study of various forms of the earth's surfaces. The beginning of scientific knowledge is associated with the discovery of the differentiation of delta geosystems into separate parts (reservoir basins, small deltas), with the search for relief elements (rise and fall) of an integral delta. It is with the concept of relief elements that historically and logically the formation of "tree-like" structures of delta geosystems begins. The systematic approach seeks to identify regular relationships between negative and positive landforms, to reveal the ways of formation of reservoir basins from its constituent parts. Special interest in the study of connections and relationships is a characteristic feature of the relief plastics method.

Knowledge of intra-basin differentiation and backbone flows brings us back to the integrity of the reservoir basins. At the initial stage of cognition, the internal structures of the

object are represented by displaying the forms of the earth's surface on the map of relief plastics, which allow us to study the formation, development and structure of forms of the earth's surface, etc. The study of relief elements (rise and fall) of collector basins and their essential connections allows us to understand the integrity of irrigated areas taking into account the collector pools on a new, deeper base. From the foregoing it follows that in the process of studying within the basin differentiation, at least three main factors can be distinguished: elements of the earth's surface; interconnections and interrelationships of these elements; the functional integrity of the pool. Studying the structure of the system-forming flows of the collector basins, one can speak, respectively, about three main aspects of the category structure of the system-forming flows of the collector basins, one can speak, respectively, about the three main aspects of the structure

category - elements, connections and integrity, that is, these aspects constitute the essence of the study intra-basin differentiation.

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