

THE CONCEPT OF ECOLOGICAL HISTORY AND SCIENTIFIC APPROACHES TO ITS RESEARCH

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Annotation

The article examines the formation of the concept of environmental history, its theoretical foundations, and scientific approaches to research. The stages of environmental history development as an independent scientific field are analyzed, and its interdisciplinary nature and significance in studying the relationship between nature and society are highlighted. Particular attention is paid to the practical importance of environmental history using the example of the Aral Sea basin in Central Asia. The role of historical and environmental analysis in identifying the causes of ecological crises and developing scientifically grounded solutions for sustainable development is substantiated.

Keywords: environmental history, nature–society interaction, interdisciplinary approach, Aral Sea, water policy, ecological crisis, geoecology.

In modern historiography, ecological history has emerged as an important scientific direction aimed at the comprehensive study of human and nature relations. In the second half of the 20th century, as a result of the intensification of global environmental problems, the need arose to analyze the relations between nature and society from a new perspective [1]. This process became the basis for the formation of ecological history as an independent discipline.

The concept of ecological history implies the study of the impact of human activity on the natural environment and the impact of changes in nature on the development of society as a historical process. This approach requires considering nature not as a passive environment, but as an active participant in historical processes [2].

The formation of ecological history has been actively developing within the international scientific community since the 1970s, during which specialized scientific societies and specialized journals were established [3].

Theoretical foundations of the concept of ecological history.

Ecological history is a scientific field aimed at studying how human and nature relations have changed over time. The main task of this field is to identify the mechanisms of interaction between the natural environment and human activity [1].

In the theory of ecological history, nature is considered not only as a source of resources, but also as an important factor influencing social development. This approach shows that the relationship between nature and society is two-way [4].

The impact of changes in the natural environment on the development of society is manifested in connection with economic, demographic and political factors. Therefore, ecological history requires an analysis of the relationship between nature and society as a complex system [2].

The theoretical foundations of ecological history allow for a deep analysis of ecological processes by combining data from various scientific fields. This indicates that this field has an interdisciplinary nature [3].

The interdisciplinary nature of ecological history.

One of the important features of ecological history is its interdisciplinary nature. This field widely uses data from such disciplines as history, geography, ecology and economics [4].

An interdisciplinary approach allows for a comprehensive analysis of ecological processes. Archival documents, statistical data, and cartographic materials are important sources for determining the historical dynamics of ecological changes [5].

Methodology of ecological history. A number of scientific methods are of great importance in the study of ecological history. Among them, historicity, comparative analysis, periodization, and spatial analysis methods occupy a key place [6].

The principle of historicity requires the study of ecological processes in relation to the conditions of a particular period. The comparative analysis method allows for a comparison of ecological changes in different regions or different periods [7].

While the periodization method allows for the separation of stages of ecological processes, the spatial analysis method serves to determine the territorial characteristics of ecological changes [6].

Analysis of ecological history on the example of the Aral Sea. The practical importance of the ecological history approach in the Central Asian region can be clearly seen on the example of the Aral Sea. As a result of the expansion of the irrigation system in the second half of the 20th century, the volume of water entering the sea sharply decreased [8].

In the 1960s, the Aral Sea area was approximately 66,000 km², but in recent years its size and area have sharply decreased. This is due to the inefficient use of water resources [9].

The extensive use of water resources, especially the expansion of irrigation systems, has had a significant impact on the Aral Sea ecosystem. This process clearly demonstrates the impact of human activity on the natural environment [10].

Ecological changes in the Aral Sea basin have also affected the lifestyle of the population. As a result of the decline in sea levels, a number of coastal areas have lost their economic importance [11].

Conclusion

The conducted analyses have shown that ecological history is an important scientific direction aimed at studying the relationship between man and nature. The interdisciplinary nature of ecological history increases its scientific significance and allows for a comprehensive analysis of ecological problems.

The example of the Aral Sea basin clearly demonstrates the practical significance of the ecological history approach. This approach demonstrates the need to use historical experience in solving ecological problems.

References:

1. Hughes J. D. What is Environmental History? — Cambridge: Polity Press, 2016. — 180 p.
2. McNeill J. R. Observations on the Nature and Culture of Environmental History // History and Theory. — 2003. — Vol. 42. — P. 5–10.
3. Worster D. The Two Cultures Revisited: Environmental History and the Environmental Sciences // Environment and History. — 1996. — Vol. 2. — No. 1. — P. 3–14.
4. Cronon W. A Place for Stories: Nature, History, and Narrative // The Journal of American History. — 1992. — Vol. 78. — No. 4. — P. 1347–1376.
5. Peterson M. K. Pipe Dreams: Water and Empire in Central Asia's Aral Sea Basin. — Cambridge: Cambridge University Press, 2019. — 350 p.
6. Frenken K. Irrigation in Central Asia in Figures. — Rome: FAO, 2013. — 265 p.
7. Dukhovny V. A. Water Resources Management in Central Asia. — Tashkent: SIC ICWC, 2010. — 112 p.



8. Micklin P. The Aral Sea Disaster // Annual Review of Earth and Planetary Sciences. — 2007. — Vol. 35. — P. 47–72.
9. Glantz M. Sustainable Development and the Aral Sea. — Cambridge: Cambridge University Press, 1999. — 294 p.
10. Zonn I. S. The Aral Sea Encyclopedia.-Berlin: Springer, 2010. — 290 p.
11. Плотников И. С., Аладин Н. В. Современное состояние остаточных водоемов Аралского моря. — СПб.: ЗИИ РАН, 2004. — 96 с.