DIFFUSE POLLUTION OF NORYN RIVER WATER

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ANNOTATION
The study of diffuse pollution of waters of water bodies under the influence of natural-climatic and anthropogenic sources is one of the topical issues. The study of diffuse pollution of the water of the Naryn River, which is the source of drinking water in the Namangan region, and the prevention of its negative consequences create an opportunity to provide the population with clean drinking water.

Keywords. Natural factors, climatic factors, anthropogenic factors, sources of drinking water, diffuse pollution, Naryn River, drinking water.

The suitability of natural water for drinking is one of the most pressing issues of our time. Assessing and controlling the contribution of diffuse pollution throughout the watershed, which is not yet included in the control, monitoring and protection system, is a difficult and complex issue. Diffuse water pollution is a complex process associated with the pollution of drinking water sources that occurs in a combination of many hydrological and geochemical processes in water bodies. The study of diffuse pollution of any water body (SO) inevitably involves the study of the regime of influence of natural-climatic and anthropogenic factors on the quality of surface and groundwater in the watershed.
One of the main sources of drinking water in the Namangan region is the Naryn River. The organic and inorganic composition of the Naryn River water varies throughout the year depending on natural-climatic and anthropogenic factors.
The impact of natural and climatic factors on the quality of river water is especially significant in the spring. Some of the atmospheric precipitation that occurs in the Naryn River catchment area added to groundwater due to filtration. The rest forms a stream at the surface, carrying various minerals and organic matter into the river, causing changes in water quality. On some days of the spring season, atmospheric precipitation is so high that it is not possible to remove the turbidity in the river water using water treatment plants. As a result, the water supply system of Namangan cities and districts was suspended, it sometimes for several days. The regular water supply of water supply systems of Namangan city and districts, overcoming the negative impact of natural-climatic and anthropogenic factors, remains one of the most pressing issues of our time.
In studying the problem of diffuse pollution of drinking water sources, according to L.D. Ratkovich et al. [1], the factors affecting drinking water quality divided into climatic and groundwater flows into the drinking water source. It overlooked that many factors affect drinking water quality, but in most cases, the decisive factor is natural and climatic factors. Each natural-climatic region is individual and has significant differences in the formation of diffuse pollution of water bodies in different regions of Uzbekistan. The study of the impact of natural-climatic and anthropogenic factors on the water quality of water bodies is of great importance for the efficient use of drinking water sources in the water supply system. [2-6]
An individual and comprehensive study of the impact of natural-climatic and anthropogenic factors on the diffusion pollution of the water basin will be a more accurate and reasonable solution to study this issue. This leads to a reduction in the cost of drinking water treatment, reliable information about its quality, and the amount of organic and inorganic substances in it. Monitoring the state of diffuse pollution of a water body (SO) allows the development of a system for assessing and forecasting water quality.
It is very difficult to assess the distribution of natural-climatic and anthropogenic factors along the length of the river, and the multifaceted (direct and indirect) impact of pollution sources. To date, they have not adequately studied the Naryn River basin.
Natural-climatic conditions, in our opinion, are a key factor in the formation of hydrological, and hydrochemical regimes of the watershed. After all, diffuse pollution of SO is mainly determined by the functioning of water bodies as a hydrological system [5]. Leakage processes and natural-climatic factors

(precipitation, infiltration, filtration, evapotranspiration, etc.) play a dominant role in the transport of biogenic substances. This in turn leads to the eutrophication of SO [3-4].

Eutrophication (Greek eutrophía means good nutrition) is the saturation of water bodies with biogenic elements, which leads to an increase in the biological productivity of water bodies. Eutrophication can occur, as a result, water body aging or anthropogenic impacts. Phosphorus and nitrogen are the main chemical elements in the formation of eutrophication. Eutrophic water bodies characterized by littoral and sublittoral vegetation (abundant plankton).

The methodological basis for the study of research on this topic is an analytical review of the scientific work of world scientists on the problem of the impact of water pollution on water bodies. The study of this issue carried out using a systematic and theoretical analysis of the scientific literature, methods of graphical presentation of data, comparison, and systematization.

The study of diffuse pollution of the Naryn River, a source of drinking water in the Namangan region, and the elimination of its negative consequences will provide the population with an uninterrupted supply of clean drinking water.

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