

## **ECOLOGICAL PROBLEMS OF WATER RESOURCES IN UKRAINE**

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Water resources are one of the most important components of the environment, providing both human needs and ecological balance. In Ukraine, the state of water resources has become a significant ecological concern due to rapid industrialization, urbanization, agricultural practices, and the ongoing consequences of armed conflict. Rivers, lakes, and underground aquifers are facing serious pollution from chemical, biological, and physical sources.

Industrial effluents, particularly from metallurgy and chemical production, introduce toxic substances into water bodies, which negatively affect both human health and aquatic ecosystems (Ivanov, 2019, p. 45). Agricultural activities contribute to nutrient overload, leading to eutrophication of lakes and reservoirs, which in turn causes a reduction in biodiversity and the degradation of water quality (Petrenko, 2021, p. 102).

Urbanization also significantly affects water resources. Many cities in Ukraine

still lack proper sewage treatment facilities, resulting in the discharge of untreated wastewater into rivers. This practice not only contaminates drinking water sources but also disrupts natural habitats (Shevchenko, 2020, p. 67).

A particularly severe impact on water resources occurred in 2022 during the armed conflict, when the Kakhovka Hydroelectric Power Station was destroyed. The sudden release of water caused massive flooding downstream, destruction of ecosystems, loss of freshwater habitats, and contamination of soil and groundwater with debris and pollutants (Bondarenko, 2023, p. 54). Additionally, the loss of the reservoir drastically reduced water supply for irrigation, industrial use, and domestic needs, exacerbating the existing ecological problems in southern Ukraine.

To address these ecological problems, it is essential to implement integrated water management strategies, strengthen environmental legislation, and promote public awareness of water conservation (Kravchenko, 2018, p. 78). Modern technologies for wastewater treatment, pollution monitoring, and sustainable agricultural practices should be adopted to reduce the negative impacts on water ecosystems. Cooperation at local, national, and international levels is crucial to ensure sustainable use and protection of water resources in Ukraine.

In conclusion, the ecological problems of water resources in Ukraine are complex and multifaceted, requiring urgent attention from both government authorities and society. Sustainable water management, pollution control, environmental education, and recovery efforts after infrastructural destruction such as the Kakhovka HES incident are key measures for preserving Ukraine's water resources for future generations.

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