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REFORMING AND INFORMATIZATION OF THE SPHERE OF WATER MANAGEMENT IN UKRAINE

Water is our heritage, which should be preserved and protected. However, water resources, both in Ukraine and in the world, are under increasing pressure, which stems from the unceasing growth of humanity's needs in sufficient quantity of water of the proper quality. Therefore, “Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy” was developed in order to implement the European Community policy on the environment and manage water resources. The European integration course of Ukraine, and in particular the signing of the Association Agreement between Ukraine and the European Union [1] in 2014, obliges our country to implement European standards for water management, water protection and water pollution control.

In view of the significant decrease in production in Ukraine over the past 25 years, there has been a significant decrease in water consumption (from 30 km^3 to <9.7 km^3), as well as the reduction of wastewater discharged by various sectors of the economy (from 18 km^3 to 5.3 km^3). Proceeding from this, the expected improvement of the state of water resources was expected, but on the contrary, there are negative trends in the increase of the water shortage due to pollution and depletion of water resources, degradation of water ecosystems. This is happening against the backdrop of the negative effects of climate change (from 1990 to 2010 the area of arid and very arid zone in Ukraine increased by 8 million hectares compared to the 1960-1990 period) [2].

For that reason, the issue of reforming the water management of Ukraine was extremely urgent. This, above all, led to the reform of the organizational structure of the State Agency for Water Management in order to introduce a mechanism and approaches to water resources management, taking into account the basin principle of management and hydrographic zoning of the territory. In Ukraine, 9 areas of river basins were allocated.

Integrated water resources management within the area of the river basin is carried out in accordance with the developed River Basin Management Plan, one of the main stages of which is the determination of the hydrological regime of the river and the definition of water quality indicators. The key role in this is played by the state monitoring of waters, the subjects of which are the Ministry of Environment and Natural Resources of Ukraine, the State Agency of Water Resources of Ukraine, the State Service for Geology and Subsoil of Ukraine, The State Emergency Service of Ukraine, as well as State Agency of Ukraine on Exclusion Zone Management (in the exclusion zone). In particular, the State Agency of Water Resources of Ukraine

is responsible for defining a part of physico-chemical indicators, and The State Emergency Service of Ukraine - for determining the hydrological regime of hydromorphological and other indicators.

In the water sector in Ukraine in recent years, intensive introduction of the latest information technology. Among the latter is the publication of water quality data in an open format on the Open Data portal data.gov.ua. At present, the water sector creates a laboratory base for conducting high-quality water monitoring, which will be carried out in accordance with modern requirements. The obtained data should become the "starting point for writing 9 river basin management plans". This work will require the qualified and rapid processing of large amounts of data.

Another area of development of the water sector, in particular the management of surface water resources, which is rapidly "informatized", is the development of a hydrological warning service with a view to timely and reliable forecasting of periods and flood control parameters, which will ensure the timely adoption of the necessary measures to protect against flooding. This is constrained by the complexity of obtaining data from the zones of intensive formation of runoff (mountain and foothill areas), imperfect technology for observing, collecting, transmitting, and processing hydrometeorological information. Therefore, it is very important to increase the level of informativeness of the hydrological alert service by automating the whole process, ranging from streamlined river runoff forecasting.

Thus, from the above analysis of the directions of the reform of the water sector of Ukraine, one can conclude that Ukraine is moving towards a modern, responsible attitude towards water resources.

There is a gradual harmonization of national water legislation with European and world requirements. In addition, the processes of water sector reform in Ukraine require modern specialists who will have a formed set of competencies as fundamental, traditional to the water sector of Ukraine, and those that foresee future requirements, connected with the development of modern technologies, especially informational.

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