

ABIOTIC TYPOLOGY OF THE RIVERS AND LAKES OF THE UKRAINIAN SECTION OF THE WESTERN BUG RIVER BASIN AND ITS COMPARISON WITH RESULTS OF POLISH INVESTIGATIONS

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The Ukraine-European Union Association Agreement (2014) provides for the application in Ukraine of European standards and normatives. In the area of water use and water protection the main document is the EU Water Framework Directive (EU WFD).

The Western Bug river basin, which belongs to the Vistula basin, is located on the territory of Ukraine (28% of the catchment area), Poland (46%) and Belarus (26%). Abiotic typology of water bodies is an important task for the subsequent stages of the selection of water bodies and monitoring. The purpose of this investigation was to perform the abiotic typology of rivers and lakes in the Ukrainian part of the Western Bug basin and to coordinate the results obtained by Polish investigations.

The river basin of the Western Bug is mainly located within the Eastern-Baltic-Belarusian and Central Pol lowlands on the moraine-old glacial sediments. Only the upper part of the basin occupies the high-altitude areas of the Volyn-Podolsk Upland on the cretaceous sediments, as well as a small part of the Lublin-Lviv Upland on the loess.

The completed investigation, which are based on the requirements of the EU WFD and rivers typology systems adapted in Ukraine and Poland, allowed us to identify: for the Western Bug river basin within Ukraine 9 abiotic river types, within Poland - 7. In the Western Bug basin is dominated by small and medium rivers of lowlands and uplands of the Eastern Plains on silicate rocks. The Western Bug belongs to very large rivers, the Poltva, the Rata and the Luga belong to large rivers.

Within the Ukrainian part of the Western Bug river basin, there are only 2044 rivers, of which 2010 (98.35%) are small rivers. The length of the majority of them (1966 rivers are small) doesn't exceed 10 km. Middle rivers are 1.45%. Large and very large rivers are 0.15% and 0.05% of their total, respectively.

Should be noted that the complex studies of lakes in the Western Bug river basin in Ukraine are worse than Polish. The available information about lakes on the Ukrainian territory is often represented only by their morphometric characteristics. In the Ukrainian part of the Western Bug basin the majority (48 lakes or about 71%) of the existing 68 lakes are classified as very small according to the EU WFD. There are 9 small and 9 medium lakes (13% of the total amount), two large lakes (the Svitiaz and the Pulemetskoe) - 3.0%. Generally, in the Ukrainian part of the Western Bug basin 8 abiotic types of lakes were identified. Shallow and medium depths are dominated by small and medium lowland lakes on silicate rocks.

An important prospect for further work in this direction is to conduct comprehensive hydroecological research of lakes in the Western Bug river basin in Ukraine for their more detailed typology according to the EU WFD.

References

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