

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

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### ABSTRACT

The typology of rivers, which has been made in line with European Union WFD and the typological system adopted in Poland, allows identification of: for the Bug Basin – five abiotic types of rivers within the Ukraine and seven abiotic types within Poland; for the San Basin – four abiotic types of rivers within the Ukraine and ten abiotic types within Poland. By WFD EU the prevailing majority of small and medium upland rivers are on carbonate rocks or eolian soils. The Bug River itself is categorised as a very large river. The largest group in the basin of the San consists of small and medium upland rivers on flysch rocks of the Carpathians. The San River belongs to very large rivers – Vyshnia and Zavadvka (Lubachivka). Overall within the Ukrainian part of the Bug basin there are 2 045 rivers, of which 2 010 (98,3%) are small rivers. The length of the vast majority (1966 small rivers) does not exceed 10 km. Only 1,45% of all basin rivers are medium ones. The percentages of large and very large rivers in the total number of rivers are, respectively, 0,2 and 0,05%. Overall within the Ukrainian part of the San basin there are 1 070 rivers, of which 1 058 (98,9%) are small rivers. The length of the overwhelming majority, that is 1 033 small rivers, does not exceed 10 km. Only 0,8% of all basin rivers are medium ones. The percentages of large and very large rivers in the total number of rivers are, respectively, 0,2 and 0,1%. The comprehensive study of lakes in the Bug and San basins is at a slightly less comprehensive level in Ukraine, as compared to Poland. Available information relating to the lakes in the river basins under investigation is concerned with the water surface area. There are 68 lakes within the Ukrainian part of the Bug basin, the majority of them (48 lakes or nearly 71%), when classified using the WFD, are related to the category of very small lakes. As for the categories of medium and small lakes, each of them has nine lakes (13%). There are only two large lakes, the water surface area of which equal from 10 to 100 km<sup>2</sup>. These are the Switiaz and the Pulemetske Lake (13%). Within the Ukrainian part of the San basin, no natural origin lake with an area of over 0.5 km<sup>2</sup> was identified. The existing 32 lakes with 0,26 km<sup>2</sup> of their total area are attributed to the category of very small lakes and are not subject to typology. The prospects for future investigations: for the purpose of lake typology in the Bug basin within the Ukrainian territory, as prescribed by the WFD And classification system adopted in Poland, there is need for research on a set of parameters: e.g. geology of drainage system, relationship between catchment area and volume of lake, and the vertical stratification of lake water.

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