

## Municipal wastewater management in Ukraine

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### ABSTRACT

Efficient wastewater management is crucial for water quality and thus for ecosystem health in every country. Today, a large volume of untreated or insufficiently treated wastewater is discharged into natural waters annually in Ukraine. Over 13 million rural Ukrainian residents do not have an access to wastewater treatment facilities. 25,611 rural settlements (98%) do not have sewage systems. A total of 1,292 settlements in Ukraine (only about 5%) are provided with sewage systems. There are no sewage systems in some small towns, as well as in most private buildings of larger cities. A case study of wastewater management in Southern Bug Basin was analyzed. Over one million people in rural areas of Southern Bug Basin discharge household wastewater without any treatment. The annual volume of wastewater discharged in Vinnytsia region located in Southern Bug Basin is accounted for around 60 million m<sup>3</sup>. Only 47% of this amount is treated. The main source of household wastewater in the Southern Bug Basin is the regional centers – Mykolayiv, Vinnytsia, and Khmelnytskyi. The analysis of water in three control sites in the Southern Bug Basin near Vinnytsia shows accumulation of nitrites in the water as the biggest problem for Southern Bug River since nitrites content exceeds the limit in all control sites.

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