

RIVER BASIN GEOGRAPHY



The transboundary Vistula River Basin is located on the territory of **four countries**: Ukraine, Republic of Poland, Republic of Belarus and the Slovak Republic.



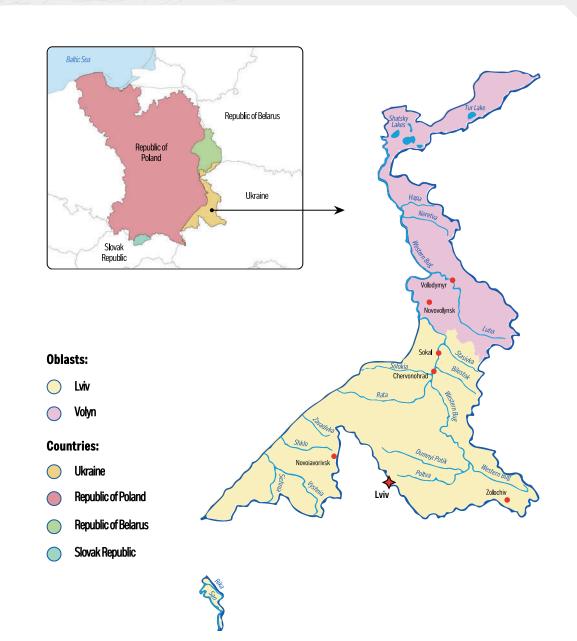
It covers the territory of **2 oblasts of Ukraine** (Volyn and Lviv). The Vistula River Basin District in Ukraine includes the **Western Bug River sub-basin** and the **San River sub-basin**.

269 surface water bodies (SWBs):

- **84** rivers
- 19 lakes
- transitional waters
- 0 coastal waters
- **160** HMWBs*
 - 6 AWBs*

9 groundwater bodies (GWBs)

* HMWBs - heavily modified water bodies, AWBs - artificial water bodies



ECOLOGICAL STATUS AND POTENTIAL



MAIN ELEMENTS:

- **✓ Biological** (composition and abundance) parameters
 - macro invertebrates
- other aquatic flora
- phytoplankton
- fish (not determined)

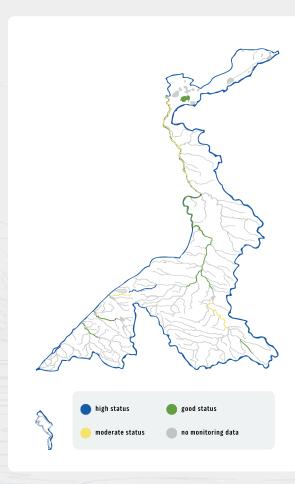


SUPPORTING ELEMENTS:

- Chemical and physico-chemical parameters
- Hydromorphology (flows, sediments)
- Basin specific (synthetic and non-synthetic) pollutants

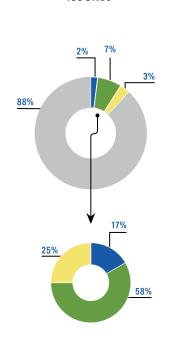


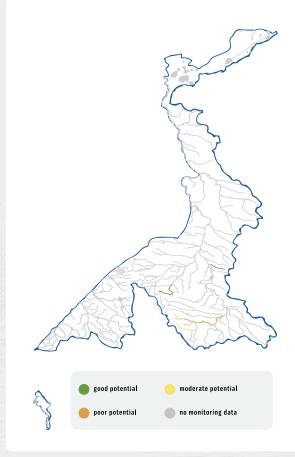
Link to the methodology document



ECOLOGICAL STATUS

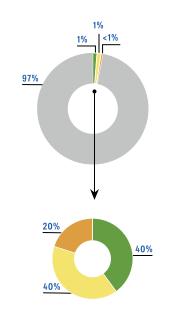
Defined only for the category of natural surface water bodies, **103 SWBs**





ECOLOGICAL POTENTIAL

Defined only for the categories of heavily modified (HMWB) and artificial (AWB) surface water bodies, **166 SWBs**



CHEMICAL STATUS



This is determined for 45 pollutants.

If the concentration of any of them exceeds the established environmental quality standard for surface water, the status of the SWB is classified as "failure to achieve good status".



Exceedances of the following pollutants were identified:

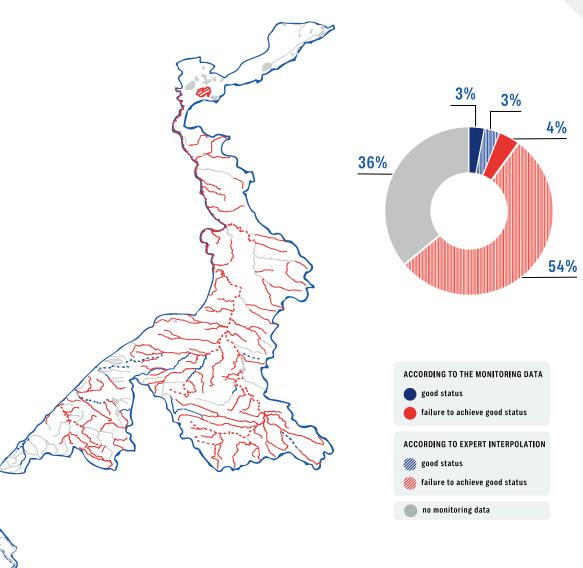
anthracene, cadmium, fluoranthene, benzo(k)fluoranthene, nickel, benzo(b)fluoranthene, benzo(g,h,i)perylene, cypermethrin, terbutryn, mercury.



Chemical monitoring of GWBs is not conducted at present.



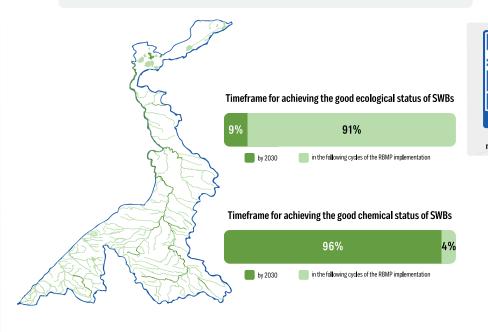
List of pollutants





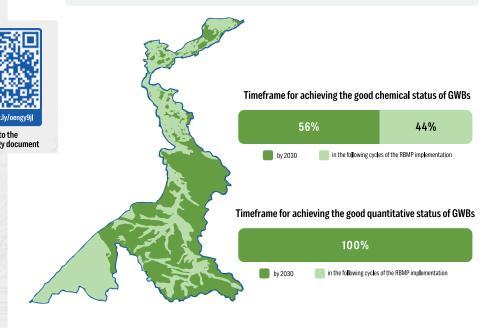
ENVIRONMENTAL OBJECTIVES FOR SWBs*

- **Preventing the deterioration** of all SWBs
- Achieving / maintaining a **good ecological** and **chemical status** of all natural SWBs (rivers, lakes, transitional and coastal waters)
- Achieving / maintaining a **good ecological potential** and **chemical status** of heavily modified and artificial SWBs
- Gradual reduction to the complete absence of hazardous substances



ENVIRONMENTAL OBJECTIVES FOR GWBs

- **1** Preventing the deterioration of all GWBs
- Achieving / maintaining a **good quantitative** and **chemical status** of all GWBs
- Preventing and limiting groundwater pollution

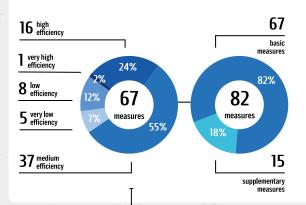




^{*} The map shows the deadlines for achieving a good ecological status of the SWBs

SANITATION

PROGRAMMES OF MEASURES



€501M* TOTAL COSTS OF MEASURES

€58*

COSTS OF MEASURES PER INHABITANT PER YEAR



A full list of Measures is available in the Vistula River Basin **Management Plan**

Comprehensive reconstruction and modernization of the WWTP** at the "Lvivvodokanal" in Lviv city

- Construction of a sewage sludge thermal utilization unit at the WWTP in Lviv
- Construction of a mechanical sludge dewatering unit at the WWTP in Lviv
- Construction of a storm water treatment plant for wastewater from sewage machines of non-sewerage areas at the WWTP in Lviv
- Reconstruction of the WWTP in Lyubom city

- 6 Project of wastewater heat utilization at the discharge from the WWTP in Lviv
- Reconstruction of the main sewer collector in Lviv
 - Reconstruction of WWTPs and SNs** in the towns of Novovolvnsk, Blahodatne, Chervonohrad, Hirnyk, Volodymyr, Novoyavorivsk... the village of Silets
- Comprehensive reconstruction of sewage pumping stations (SPSs) in Lviv
- Reconstruction of WWTPs and SNs in the cities of Sokal, Zolochiv, Kamianka-Buzka... the towns of Zhvyrka, Zapytiv... the villages of Neslukhiv, Lokachi, at the Utility Company "Dobrobut" in the Shatsk village...
- Construction of WWTPs and SNs in the cities of Belz, Hlynyany, Sudova Vyshnia, Yavoriv... the towns of Yampil, Shklo, Zapytiv... the villages of Sasiv, Pidhirne, Tur, Verblyany, Borshchovychi, Ozhydiv, Batiatychi, Turynka, Remeniv, Velyke Kolodne...

TOTAL COSTS OF MEASURES

HYDROMORPHOLOG\

- Revitalization of the Krasnosilka, Zavadivka, Blekh rivers, upper reaches of the Western Bug River
- Restoration of the storage volume and dredging of Dohrotvir Reservoir

AGRICULTURE

Establishment of water protection zones and bank protection strips for water bodies in the Vistula River Basin within Lviv and Volyn oblasts

Improvement of state accounting of the water use in the Vistula River Basin





Mitigating the impact of planned infrastructure projects: Construction of the northern section of the Lviv Bypass Road; improvement of the transport and operational condition of roads on the approaches to the Ukraine-EU border crossing points in Lviv oblast (the road MO9)

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INDUSTRY

Reconstruction of the WWTP and SN at the "Radekhivskyi Sugar LLC"

VERY HIGH EFFICIENCY



of the budget

. . .







HIGH

EFFICIENCY





MEDIUM

EFFICIENCY

LOW **EFFICIENCY**



3% benefit for of the budget 331K ppl.

VERY LOV



< 1% of the budget

benefit for 4.2K pp

SUPPLEMENTARY MEASURES



measures



benefit for 1.4M ppl.

- Educational activities
- Inventory of the network of observation wells
 - Reassessment of operational groundwater reserves
- Development of recommendations for the restoration of the forest landscape of river valleys
- Collection and use of rainwater and graywater
- Development of a Drought Management Plan (DMP) as part of the RBMP



