

European Union Water Initiative Plus for Eastern Partnership Countries

Ukraine presents its newly renovated Environmental Laboratory (Vyshgorod Laboratory) on the occasion of the World Water Day, 22 March 2021

Briefing Note: background information and key messages

VENUE: Basin Laboratory of the *Interregional office of protective arrays of Dnipro reservoirs* of the State Agency of Water Resources of Ukraine (SAWR) Vyshgorod, Ukraine

BACKGROUND

On the Opening event of the modernised Vyshgorod Laboratory, the Ministry of Environmental Protection and Natural Resources of Ukraine presents together with the European Union Water Initiative Plus for Eastern Partnership Countries (EUWI+) its advancements towards sustainable water management as well as the continued effort and commitment of Ukraine and the European Union towards water policies and practices that protect people's lives and sustainable livelihoods.

PROMOTING THE VALUES AND ACTIONS OF THE EUROPEAN UNION

The European Union has a responsibility towards its citizens, especially the future generations, to promote sustainable development and to protect natural resources. Water supports life and is a crucial resource for humanity, generating and sustaining economic and social prosperity. It is also at the core of natural ecosystems and climate regulation.

The European Union is taking action:

- it shows the way forward by setting global rules and standards to protect the environment, including water resources. The **EU Water Framework Directive** is the most ambitious piece of European environmental legislation and takes a pioneering, more sustainable and holistic approach to protecting water.
- it supports Ukraine's aligning with EU environmental standards. Harmonization of Ukrainian legislation with the EU legislation in the water sector will contribute to environmental protection at national and transboundary levels and ease the association with the EU.
- it supports Ukraine through technical assistance and capacity-building projects such as **EUWI+**. **The EU is co-financing 95% of the total amount of the project (24 million Euro)** invested into 6 countries. **Other support comes from Austria and France** through the Austrian Development Agency and the French Artois-Picardie Water Agency.

PRESENTING EUWI+ MAIN ACHIEVEMENTS TOWARDS SUSTAINABLE MANAGEMENT OF WATER RESOURCES

All Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine) have recently upgraded or completely renovated their environmental monitoring and water laboratories with the support of EUWI+. By spring 2021, experts and trained personnel across the region have access to state-of-the-art analytical equipment to monitor chemical and biological parameters for water quality. The **EU investment in the laboratories alone amounts to 2.5 million Euro across the Eastern Partnership.**

Ukraine recently refurbished its laboratory in Vyshgorod and received state-of-the-art analytical equipment to monitor environmental quality parameters and to make a significant shift towards international accreditation according to ISO 17025:2017 standard. This modernization benefits also from important contributions by SAWR which includes a full renovation of the lab facility. Moreover, procurement of high-end equipment, consumables and related various expert trainings was performed.

- **Modern laboratory facilities and capacities**

- The renovation of the **SAWR Laboratory** from summer 2019 to winter 2020 at the premises of the Interregional office of protective arrays of Dnipro reservoirs and the renovation work (amounting to 5.130 million UAH -155 thousand euro - fully financed by SAWR) have ensured the laboratory facilities are fit for receiving state-of-the-art analytical equipment.
- Additionally, elements of a modern environmental laboratory like
 - a ventilation system (exhaust / air condition),
 - upgraded electricity,
 - gas pipeline (argon, nitrogen, helium, etc.) with external gas storage cabinets,
 - new floor and wall tiles,
 - separation of office and laboratory rooms (individual sample preparation and measuring rooms)
 - new appropriate laboratory furniturehave been established and were also financed by SAWR.

This is now compliant with the international ISO 17025: 2017 standard. This provides a significant improvement of the working conditions of Ukrainian laboratory staff and ensures elaborating precise and reliable analytical data.

- **New high-end laboratory instruments**

- **The new analytical devices** provided by the European Union for about 0.4 Million Euro, include
 - measuring equipment:
 - a gas chromatograph with tandem mass spectrometer,
 - an atomic absorption spectrometer,
 - an atomic fluorescence spectrometer,
 - and equipment for sample preparation
 - a solid phase extraction system,
 - a microwave digestion
 - a solvent evaporator as well as

various items for the entire work flow

- consumables (solvents, chemical standards, glassware etc.) and
- small laboratory equipment (rotary evaporator, lab dish washer, magnetic stirrers etc.).

- EU support includes delivery, installation and training for equipment operation.

As a result, the lab is now equipped to better describe the chemical status of Ukraine's water bodies. In particular, anthropogenic contaminations, like **heavy metals, pesticides and industrial pollutants**, can be detected in very low concentrations (trace levels) and at much higher precision.

- Overall aim is to **provide the required conditions for the accreditation of the Vsyhgorod lab according to ISO/EN 17025:2017** which attests compliance and high competence with the latest international quality standards for laboratories. The accreditation confirms that results provided by the SAWR laboratory are officially valid, comparable, consistent, and trustworthy, hence policy decisions can be taken based on solid scientific evidence.

- **Capacity building for the Laboratory personnel and water**

- EUWI+ trainings were organised to ensure the capacity of laboratory staff in using the new equipment. **Special trainings** were organised for the determination of organo-chlorine pesticides and mercury.
- EUWI+ also provides **assistance** with the preparation of all necessary documentation **for the application for accreditation** (setting up the required quality management system documentation).

Other support for water monitoring in Ukraine

In addition to the above, EUWI+ recently presented together with the Ministry the results of a **pollutant screening** carried out in October 2020 for the first time in the Dnipro river basin. More than 67.000 substances were screened from samples taken at 27 sites **across the Dnieper basin** from Belarus to the Black Sea coast: pesticides, pharmaceuticals and heavy metals were found in concentrations that most of the time exceed European Union standards. Based on these analyses, the State Agency of Water Resources has been given a list of **21 specific river-basin substances** to include in its surveillance monitoring programme. In the future, these substances should be monitored in particular by the Laboratory in Vyshgorod.

More EU support for other competent institutions in Ukraine

WFD requires to regularly monitor the status of all surface waters, groundwaters and coastal waters. Therefore, other competent Ukrainian institutions are also supported:

- Further training and new equipment for monitoring surface water **biology** and **groundwater** is provided by EUWI+ to the Ukrainian Hydro-meteorological Center (UHMC), the Central Geophysical Observatory named after Boris Sreznevsky (CGO) and to Geonadra.

- Similar support (for monitoring of the Black Sea coastal zone and marine environment) will be provided to the laboratory of the Ukrainian Scientific Center of Ecology of Sea (UKRSCES) through the forthcoming EU/UNDP EMBLAS4EU project; this follows up of the recently concluded EU/UNDP EMBLAS-Plus project.

HIGHLIGHTING CONCRETE RESULTS FOR THE BENEFITS OF CITIZENS

- EUWI+ expert teams disseminate the **same methodologies, approaches and tools in the 6 Eastern Partnership countries**. This mainly contributes to developing a **common approach to water management** in transboundary river basins.
- As a result, it will **harmonize data collection at the European level** and help provide the decision-makers with the information they need

- **Better monitoring for better policy decision-making**

With the laboratory upgrade, Ukrainian laboratory experts have now access to better knowledge and equipment for the analysis of water samples. The results of their analysis will lead to more exact conclusions on the present status of a water body and the impact of human activities on its ecological quality. Based on this information, water managers will be able to take decisions on the best and most cost-efficient water resources protection measures that respect the quality of waters and the needs of the population, agriculture and industry.

- **Better monitoring for better transparency and accountability to citizens**

Strengthening the links between people and the institutions that serve them starts with building trust and confidence. By moving towards the European Union Water analysis standards and eventually obtaining the international accreditation, the Ministry of Environmental Protection and Nature Resources of the Ukraine ensures better level of transparency concerning the status of water resources and the management of this vital resource.