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EU4Environment in Eastern Partner Countries:  
Water Resources and Environmental Data (ENI/2021/425-550)

## TRAINING REPORT

### SURFACE WATER STUDY VISIT – MOLDOVA (IN AUSTRIA)

**Date:**  
2-6 October 2023

**Training Lead:**  
Umweltbundesamt  
**Main partner:**  
EAM  
DWS Hydro-Ökologie  
ADA

**Output n°:**  
1.2; 1.4

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## 1. Outcome of the study visit and training

EAM and the EAM Reference Laboratory sent five persons for a study visit to Vienna. Thematically the event was divided into two parts. On the one hand, representatives of the competent Austrian public institutions provided the participants with the theoretical knowledge of surface water monitoring structure and practices, while on the technical level, Moldovan experts received a hands-on training on field work, lab work, as well as an overview on data handling and storage.

### Overview:

- Participants accompanied Austrian experts during fieldwork.
- Moldovan biologists received training on biological lab work.
- Moldovan experts visited different Austrian administrative entities and were introduced to Austrian and international water monitoring policies, procedures, and structures.
- Moldovan experts received information about data handling, interpretation, and storage.



**Figure 1: Visit to the Austrian Federal Ministry for Agriculture, Forestry, Regions & Water Management - Department of National and International Water Management.**

### 1.1. Institutional study visit

The Director of Environment Agency Moldova (EAM) and the Head of EAM Reference Laboratory, as well as three technical experts visited the Austrian Federal Ministry for Agriculture, Forestry, Regions & Water Management - Department of National and International Water Management and received an introduction and lecture on Water Framework Directive (WFD) compliant monitoring in Austria and its structure. In a visit to the Municipal Dept. 45 for Water Management of the City of Vienna, the role of regional administration and competent authority in implementing WFD-monitoring was presented to the head of EAM and EAM Lab.

The group also travelled to the secretariat of the International Commission for the Protection of the Danube River (ICPDR), located at the United Nations Office at Vienna, presenting the Moldovan delegation with the current state of the Trans National Monitoring Network (TNMN), which the ICPDR manages in the Danube basin. The importance of public participation and stakeholder management was highlighted as well. During this meeting, the involvement of Moldova in the Joint Danube Survey 5 (JDS5) planned for 2025 was also discussed.

Lastly, the Moldovan delegation visited the Environment Agency Austria. First, they received a tour through the Laboratory with the following stations: LC (PFAS, Pesticides, non-target analysis), GC (PAH, Phthalates), elemental analysis (Metals, Combustion-IC for AOF, EOF), Microplastic, Dioxins (National Reference Lab for POPs), Fuel Laboratory (automotive fuels), and molecular biology laboratory (National Reference Lab for GMO (genetically modified organisms), DNA-Sequencing, CALUX bioassays). Then, the Surface Water Team of the Environment Agency Austria presented the H2O Database – Austria's database where all data of groundwater and surface water rivers and lakes are collected on the basis of the Austrian ordinance of water quality monitoring. The importance of creating a structured data management when handling and coordinating data entries coming from various competent administrative organisations was highlighted.

Overall the Moldovan experts were presented with a thorough overview of both regional, national, and international water monitoring during this study visit.



**Figure 2: Visits to the ICPDR (left) and Municipal Dept. 45 for Water Management of the City of Vienna (right).**

## 1.2. Technical training

For the technical field and lab training, the experts in chemistry and biology from Moldova visited the lab of DWS Hydro-Ökologie in Vienna. The visit included a general training in WFD implementation, but also specific training in MZB and PHB taxonomy as well as data analysis. Especially the joint work at the microscope was very much appreciated and got a larger weight during the mission. The MD diatom expert learned about morphology and taxonomy of selected diatom groups. It was agreed to establish an informal technical exchange, if necessary, but also to provide more information on identification literature and, if possible, prepare slides with pre-identified taxa as reference material. In the invertebrate expert group, special work was carried out on oligochaetes, a group difficult

to identify on species level. The local MZB expert learned basic characteristics and features which are used for determination of Oligochaeta on species or at least genus level.

Besides the lab work, a joint sampling was carried out at several sites south of Vienna to explain key aspects of chemical and biological sampling. The participants benefited from accompanying AT experts in a rhithral and more potamal (ditch-like) rivers and learned where strict adherence to the methodical guidelines is necessary and where adaptations to local conditions are appropriate, if not recommended.



**Figure 3: Lecture at DWS Hydro-Ökologie.**



**Figure 4: Field work at the river Schwechat.**



### 1.3. Institutions involved

Federal Ministry for Agriculture, Forestry, Regions & Water Management - Department of National and International Water Management

City of Vienna – Municipal Dept. 45 for Water Management

ICPDR Secretariat (International Commission for the Protection of the Danube River)

Environment Agency Austria – Surface Water Team and Laboratory

DWS Hydro-Ökologie

## 2. Annex

### 2.1. List of participants

*The following experts were involved in the study visit.*

#### Moldovan Experts

<i>Institution</i>	<i>Name</i>	<i>Function / Position</i>
EAM	Gavril Gilca	Director of Environment Agency MD
EAM Reference Lab	Marina Lungu	Head of EAM Reference Laboratory
EAM Reference Lab	Natalia Zgircu	Biologist (benthic invertebrates)
EAM Reference Lab	Victoria Luchianov	Biologist (diatoms)
EAM Reference Lab	Vlad Japalau	Chemist; head of sampling group

#### Austrian Institutions and Experts

<i>Institution</i>	<i>Name</i>	<i>Function / Position / Topic</i>
Umweltbundesamt	Daniel Trauner	EU4WD Surface Water Lead
Umweltbundesamt	Alexander Zinke	EU4WD Programme Leader
Umweltbundesamt	Stephan Nemetz	Head Surface Water team
Umweltbundesamt	Sebastian Köppel	Head of Expert Team Inorganic Analysis, Spectroscopy & GMO
Umweltbundesamt	Michael Vogl	Head of Team Customer Support & Management
DWS Hydro-Ökologie	Georg Wolfram	SW Expert (data focus)
DWS Hydro-Ökologie	Daša Hlubikova	SW Expert (diatoms)
DWS Hydro-Ökologie	Wolfram Stockinger	SW Expert (benthic invertebrates)
DWS Hydro-Ökologie	Ulrich Donabaum	SW Expert (PhysChem; Benthos)
Federal Ministry for Agric., Forestry, Regions & Water Mgmt. - Dept of National and International Water Management	Karin Deutsch	Technical expert water monitoring
	Dietmar Krämer,	QM water chemistry
	Richild Mauthner-Weber	Water ecology database
City of Vienna – Municipal Dept. 45 Water Management	Thomas Ofenböck	Head of the Network Water Ecology
	Sigrid Scheickl	Monitoring Old Danube
	Florian Dossi	Monitoring New Danube & groundwater

### International organizations

<i>Institution</i>	<i>Name</i>	<i>Function / Position</i>
ICPDR Secretariat	Hélène Masliah Gilkarov	TE Public Participation & Communicat.
	Edith Hödl	TE River Basin Management

## 2.2. Time Table

Time	Organisation (venue)	Topic / comments	Persons involved
Monday 02/10/2023			
19:20	Arrival of MD delegation at Vienna airport	Transfer to hotel Boltzmann	MD team
Tuesday 03/10/2023			
8:45-9:15	Welcome Meeting by Umweltbundesamt	Venue: UBA, Ingen-Houszgasse, 6 <sup>th</sup> Floor Short meeting. Review of the agenda (any last changes).	<b>MD team</b> <i>Trauner, Wolfram</i>
10:00-11:30	Ministry for Agr. & Water Mgmt. - Dept of National and International Water Mgmt. 1st floor, room 126	Presentation by <i>Karin Deutsch, Dietmar Krämer, Richild Mauthner-Weber</i> : AT Water Monitoring (WFD) – Organization, procedures, reports	<b>MD team</b> <i>Trauner, Zinke, Wolfram Ministry</i>
11:30-12:15	Travel to 2 sampling locations south of Vienna	Drive by 2 DWS cars (up to 5+7 persons) to Schwechat.	<b>MD team</b> <i>Trauner, Hlubikova (PHB), Stockinger (MZB), Donabaum (PhysChem; MZB)</i>
13:00-18:30	Sampling and field training	near Schwechat, Fischa, Danube MZB, diatoms, physico-chemistry	
Wednesday 04/10/2023			
9:00-10:00	Visit of DWS lab:	Zentag. 47, 1050 Vienna	<b>MD team</b> <i>Georg Wolfram &amp; DWS team</i>
10:00-17:00	Lab Training: Lab taxonomic work	Lab training at DWS (taxonomic work on MZB and PHB, chem. calibration, chem. QM)	<b>3 MD lab experts</b> <i>DWS team Stockinger, Hlubikova, Donabaum</i>
11-13:00	City of Vienna – Water Mgmt. (province level; outsourcing and QC; legal permit for water users -> own water monitoring)	1200 Wien, Am Brigittenauer Sporn 7, Ebene 4, Zi. 4-18	<b>Gilca, Lungu</b> <i>Zinke, Trauner MA45</i>
13:00 – 14:30	Travel to ICPDR and small lunch	By tram/S-Bahn and subway	<b>Gilca, Lungu</b> <i>UBA: Zinke, Trauner</i>
14:30-16:30	ICPDR: DRB monitoring (MA EG) and JDS	VIC ( <u>participants pre-announced</u> ) <i>Hélène Masliah Gilkarov, Edith Hödl</i>	<b>Gilca, Lungu</b> <i>UBA: Zinke, Trauner</i>
17:00	Meeting on Lab consumables	Near U4 station Friedensbrücke	<b>Gilca, Lungu, Ghobrial, Zinke</b>
Thursday 05/10/2023			

9:00-12:00	Training on data management at lab level (linking phys-chem with Bio, reporting etc.)	At DWS lab, Zentag. 47, 1050 Vienna	<b>3 MD lab experts</b> DWS team ( <i>Wolfram, Hlubikova</i> )
10:00-12:00	Visit chemical Lab UBA, Spittelauer Lände	Lab organization and QM	<b>Gavril Gilca. Marina Lungu</b> UBA: <i>Sebastian Köppel, Michael Vogl (remote) Michael Ghobrial</i>
14:00-15:30	National database GZÜV (legal framework, database management, reporting)	UBA: meeting room BGL4, 3rd floor, Brigittenauer Lände 50-54, 1200 WIEN	<b>MD team</b> <i>Stephan Nemetz Georg Wolfram</i>
15:30-16:30	Wrap-up and end of training	Feedback	<b>MD team</b> UBA: <i>Trauner</i>
<b>Friday 06/10/2023</b>			
10:10	Flight departure of MD delegation from Vienna airport		MD team