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Water and Data in Eastern Partner Countries

EUROPEAN UNION FOR ENVIRONMENT - WATER RESOURCES AND ENVIRONMENTAL DATA (EU4ENV W&D)

PROGRAMME ELEMENTS RELATED TO ENVIRONMENTAL MONITORING AND ASSESSMENT

WGEMA 25th Session, 3 May 2023

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PROGRAMME OVERVIEW

European Union for Environment in Eastern Partnership countries -

Water Resources and Environmental Data (EU4Env - W&D)

- based on the ENI East Regional Action Programme of 15 Dec 2020
- Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Ukraine
- implementation until June 2024 in co-operation between Beneficiary Country institutions and international partners
- Building on previous programmes (European Water Initiative EUWI+ and Shared Environmental Information System SEIS II)
- Component 1 - Strengthen governance, capacity and monitoring for Integrated Water Resources Management (River Basin Management) towards more sustainable water use
- Component 2 - Extend the environmental database for knowledge-based decision-making and the access to open data

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IMPLEMENTATION LEAD PARTNERS



River basin management plans
Water allocation
Stakeholders' involvement

Water monitoring

Economic soundness
Finance mobilisation

Water and health
National policy dialogues
Transboundary cooperation



Component 1 Water Resources

Open data



Water accounting
Land and agriculture
Air and waste



International sharing of data



Component 2 Environmental Data

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WATER MONITORING - ARMENIA

- Extend monitoring **networks, frequency, parameters and interpretation** based on EUWI+ *Monitoring Development Plans*
 - **SURFACE WATER**: first surveys in Northern Basin:
 - July 2022: investigative monitoring at 15 polluted sites: chemistry, biology
 - Sept. 2022: ecolog. survey at 25 sites for future water body classification
 - **GROUNDWATER**: first survey in Northern River Basin District:
 - Aug/Sep 2022: at 30 sampling sites (for risk, status & trend assessments)
- Monitoring and assessment of **transboundary** waters:
 - Prepare new surveys at **Khrami-Debed border river with Georgia**
 - Find consensus on AM-GE monitoring agreement (with HMC, NEA, UNECE)

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WATER MONITORING - ARMENIA

• LABORATORY

- Further **trainings** of HMC staff on new equipment & WFD methods: start in Nov. 2022
- Support for achieving first **accreditation** during 2023 and extend **quality management** of the Armenian reference laboratory

• COVID-19 wastewater monitoring

- Presentation of AT/EU concept and methods to the State Water Committee, the National Centre for Disease Control NCDC of the Ministry of Health
- 14 Sept. 2022: **1st analysis** of sample from Yerevan WWTP: **SarsCov-2 found!**
- **Next steps:** Collaborative design of a wastewater-based epidemiological sentinel surveillance system for practical implementation in Armenia
 - **Pilot surveillances** and reports in 2023+2024

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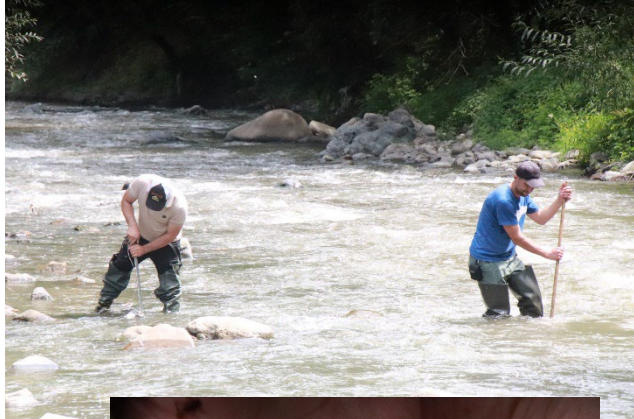
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Surveys 2022 at **Northern Basin** rivers (*left*), groundwater sites (*centre*) and at **Yerevan WWTP** and **NCDC lab** for SARS-Cov2 (*right*)

All photos: © EU4waterdata



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WATER MONITORING – GEORGIA

- Extend monitoring **networks, frequency, parameters and interpretation** based on EUWI+ *Monitoring Development Plans*
 - **SURFACE WATER:** first surveys in **Rioni-Enguri** River Basin:
 - Sept. 2022: ecological survey at 25 sites for future water body classification
 - 2023: planned *Investigative Monitoring* survey; 2nd ecological survey (lower basins); trainings on data interpretation and phytobenthos
 - **GROUNDWATER:**
 - 8-14 Nov. 2022: 1st survey at Rioni RB at 20 sampling sites (candidates for natl. network)
 - 2023: similar survey in Enguri River Basin
 - **COASTAL & TRANSITIONAL WATERS:** survey 18 – 22 August 2022 from Kobuleti to Anaklia
 - 2023: 2nd survey (phys.-chem.-biol. + pollution) Hymo monitoring of entire coast
 - Workshop on Principles of determining the Ecological Potential in HMWB
- Monitoring and assessment of **transboundary** waters:
 - New surveys at **Khrami-Debed border river with Armenia** and AM-GE monitoring agreement (with HMC, NEA, UNECE)
 - New SW and GW surveys on **Alazani with Azerbaijan**

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Survey 2022 at Rioni River Basin: **groundwater** site

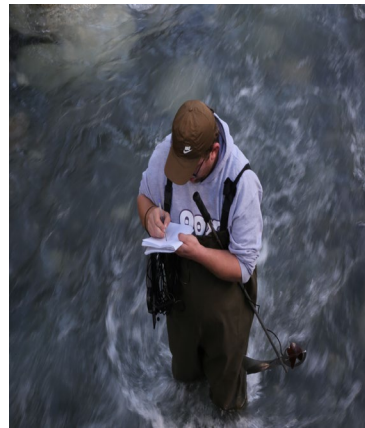


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Surface water survey 2022 at Rioni & Enguri



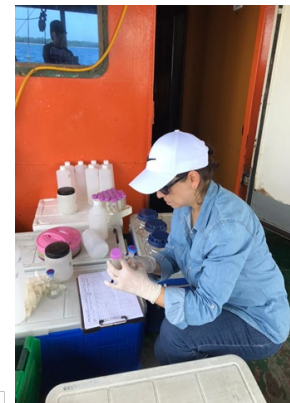
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Coastal Survey August 2022 from Kobuleti to Anaklia



© Z. Jincharadze, G. Kuspilic, NEA Batumi



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WATER MONITORING GEORGIA

• COVID-19 wastewater monitoring

- Presentation of AT/EU concept and methods to the National Centre for Disease Control NCDC of the Ministry of Health
- 28 Sept. 2022: **analysis** of wastewater from Tbilisi WWTP: **SarsCov-2 found!**
- **Next steps:** Collaborative design of a wastewater-based epidemiological sentinel surveillance system for practical implementation in Georgia
 - 19-20 Dec 2022: complementary **training** at NCDC on SARS-Cov2 analysis
 - **Pilot surveillances** and reports in 2023+2024



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WATER MONITORING

• LABORATORY

- Regional **training** with GC MS/MS equipment on ISO 28540 - Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water for WFD in Nov. 2022
 - GC experts from **GE, AZ, MD** and **UA** participated
- Additional (regional) trainings within the scope of WFD planned – will be coordinated with NEA
- UBA proficiency testing scheme (e.g. nutrients, heavy metals, pesticides, etc.) in 2023 available - will be announced soon



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WATER MONITORING - AZERBAIJAN

- Extend monitoring **networks, frequency, parameters and interpretation** based on EUWI+ *Monitoring Development Plans*

➤ SURFACE WATER:

- October 2022: **ecological survey** at 15 sites in the **Upper Kura** basin
- May 2023: 2nd **ecolog. survey** in Upper and **Lower Kura RB + Delta**
- **Trainings** on
 - 1) **Phytobenthos** (sampling, lab treatment, and identification);
 - 2) **Benthic invertebrates** (improved taxonomic resolution);
 - 3) **Data interpretation** (chemical & biological data)

➤ GROUNDWATER:

- 30 March 2023: bilateral coordination of transboundary groundwater bodies with Georgia for Alazani RBD
- June/July 2023: GW survey in **Kura delta** (focus on salinity).

➤ Monitoring and assessment of **transboundary waters**:

- September 2023: joint **SW and GW surveys** in **Alazani RB** jointly with Georgia.



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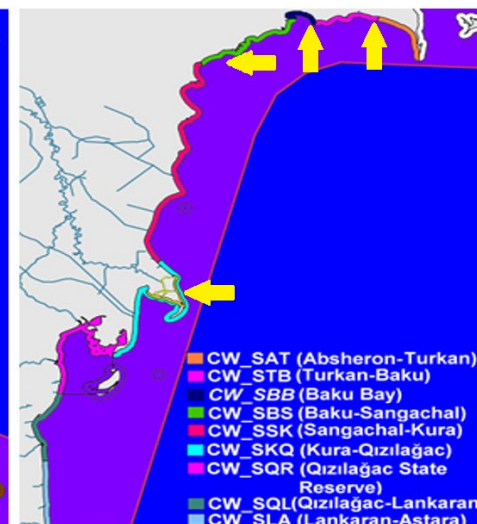
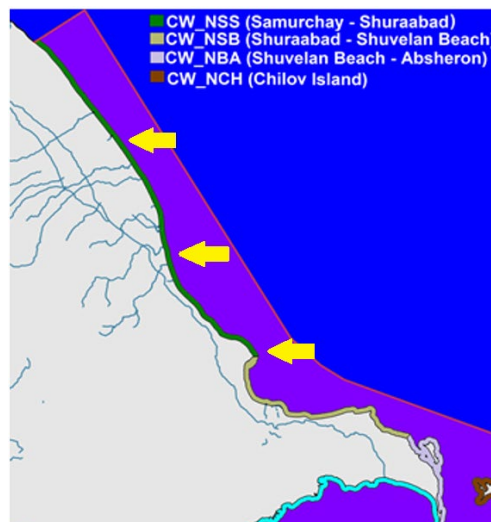




WATER MONITORING - COASTAL & TRANSITIONAL WATERS

Coastal **survey Oct. 2022** at 7 stations in selected water bodies (out of 4+9 delineated Water Bodies):
from Nizovaya (north) to Kura delta;
report (Jan 2023) jointly with CTW expert

➤ Identification of threshold values for the 5 ecological classes (*high* to *bad*).



Result:
Ecological status (draft from *autumn aspect*) ranged from *high* to *bad*.

May 2023: 2nd survey with additional sampling points in Baku Bay (*spring aspect*):
(phys.-chem.-biol.parameters)
Kura (nutrients + salinization)





DEVELOPING WATER ACCOUNTS – MOLDOVA

- **Water accounts is linking hydrological information alongside economic information in a consistent way**
- **Preparation**
 - **Introduction** to Water Accounts in April 2022 – concept, definitions, data sources.
 - **Training** on Physical Flow and Use table in March 2023.
 - Follow-up **coordination** between statistical service and Apele Moldovei and key data providers on data sources and knowledge development in March 2023.
- **Test filling of Physical Supply and Use Tables (PSUT)**
 - Support to Apelei Moldovei and statistical service by first exchanging on ways to convert/convey the UNSD Joint Questionnaire to PSUT tables.
 - Identify gaps and work together for identifying where to find additional data and estimates to fill gaps in May 2023.
 - Data collection and estimates to **fill gaps** from June - Dec 2023, if possible also at RBD and monthly level.
 - Explore how to use draft **PSUT** as a supporting tool for RBMP and other national policies - Spring 2024.



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WASTE MANAGEMENT REPORTING & STATISTICS

- Regional workshop on European waste management reporting in co-operation of environment authorities and statistical institutes – with important contributions from Ukraine and Armenia
- Georgia and Moldova have advanced in practical experience with implementation experience for Extended Producer including electronic data collection
- Ukraine – support to Ministry of Environment for developing Waste Reporting Regulation under new Waste Management Act, and experience shared on Austrian Electronic Waste Reporting system

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LAND MONITORING MEETING IN MOLDOVA

Chisinau, 01 February – 02 February 2023



Workshop on land monitoring on 1-2 February

"I hope that in 2024 we will have a high-resolution cartographic representation with data and metadata that will reflect the full coverage of the territory of the Republic of Moldova with current CORINE data" Stefan Crigan, Deputy Director General of the Agency for Land Relations and Cadastre.

Participants focused on the following issues: national implementation of the Corine Land Cover pilot project, joint assessment of available global and national land monitoring data as well as preparation and decision on the use of High Resolution Land Cover (HRVPP) data for national assessments in a pilot area.

Andreas Littkopf, expert of the Environment Agency of Austria emphasizes that this work will provide an opportunity to develop new products on biodiversity and climate change monitoring.

Read more (RO): <https://arfc.gov.md/.../monitorizarea-funciar%C4%83-%C3...>



ARFC.GOV.MD

Agencia Relatii Funciare si Cadastru a Republicii Moldova

Publicat la: Joi, 02/02/2023 - 09:22 În perioada 01-02 februarie curent, Agenția Relații Funciare și Cadastru în colaborare cu Institutul de Geodezie, Prospecțiuni Tehnice și Cadastru "Ingeocad.. găzduiește atelierul de lucru c...

<https://www.facebook.com/EU4Envwaterdata/>

- Perfectly organised at the Agency for Land Relations and Cadastre
- Around 30 experts from different ministries, Cadastre and statistical office, university lecturer, students and representative of relevant projects

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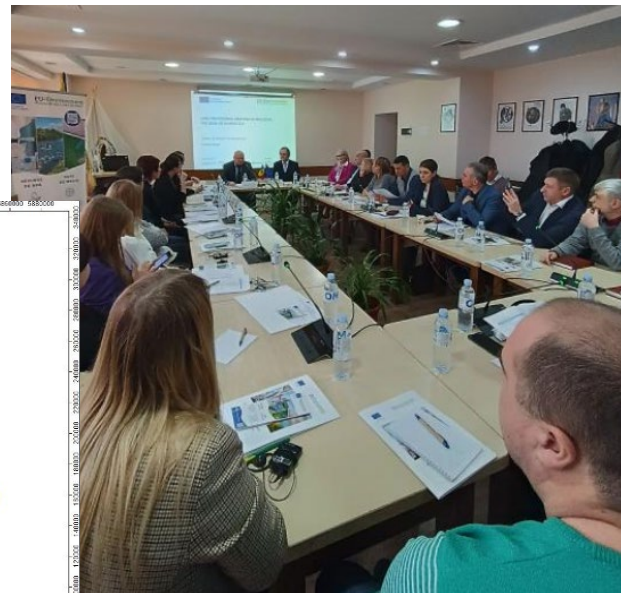
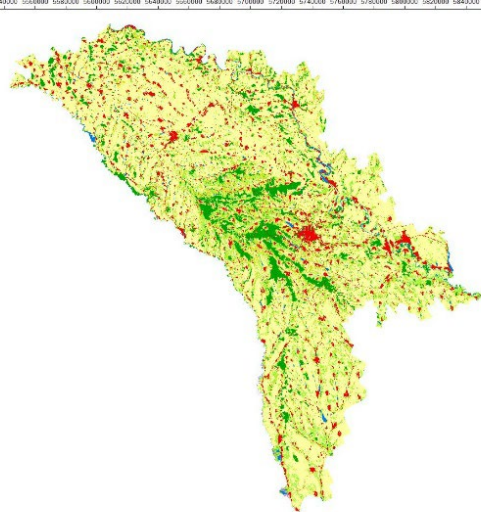
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CORINE LANDCOVER – WITH 100% COVERAGE OF THE REPUBLIC OF MOLDOVA



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- CLC Implementation by IngeoCad supported by Lechner
- assistance is provided in selection and download of imagery
- additional hands on training for the Team is planned
- Realisation till march2024

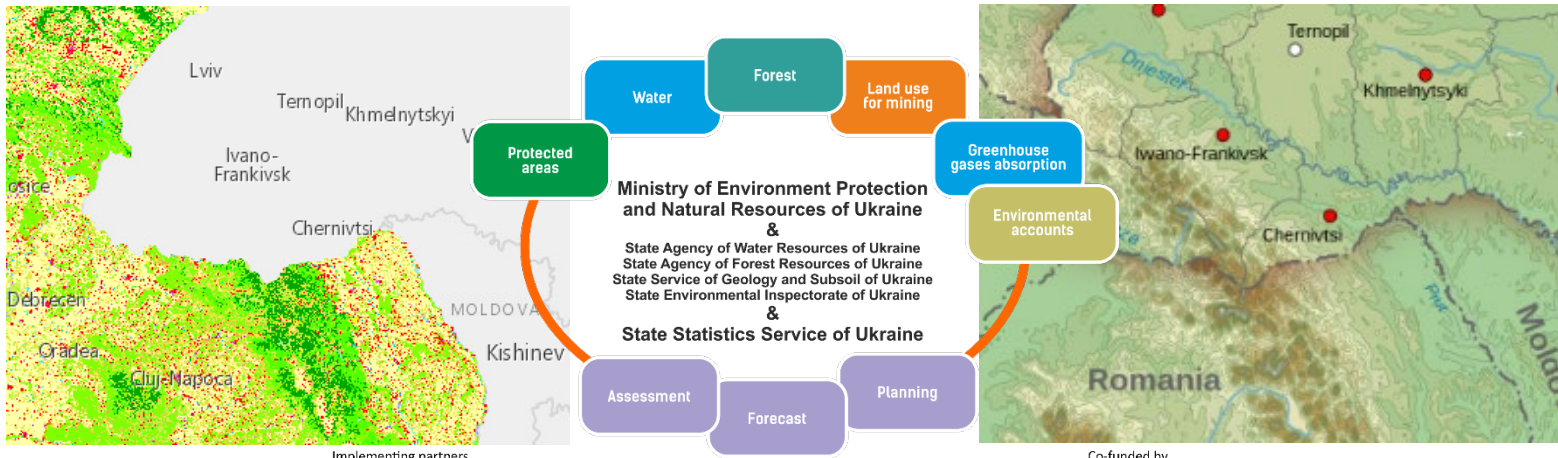


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UKRAINE - CORINE LANDCOVER FOR THE CARPATHIAN REGION (27.000KM)

<http://seis.menr.gov.ua/clc/>



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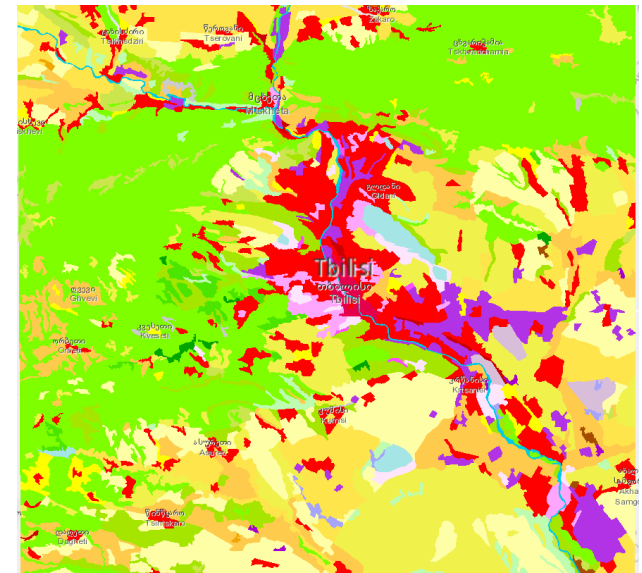


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LAND MONITORING - GEORGIA

- **Corine Landcover** Pilot Extension from Tbilisi area to Kakheti and Kvemo Kartli Regions



- European Commission has been requested to provide **Copernicus High-Resolution-Layers** also to Eastern Partner countries

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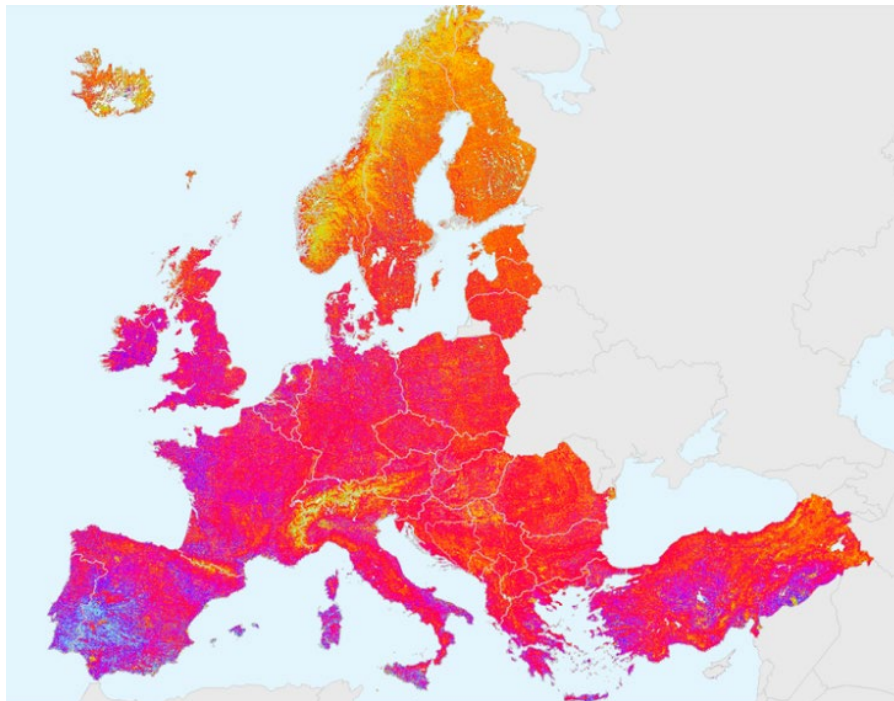




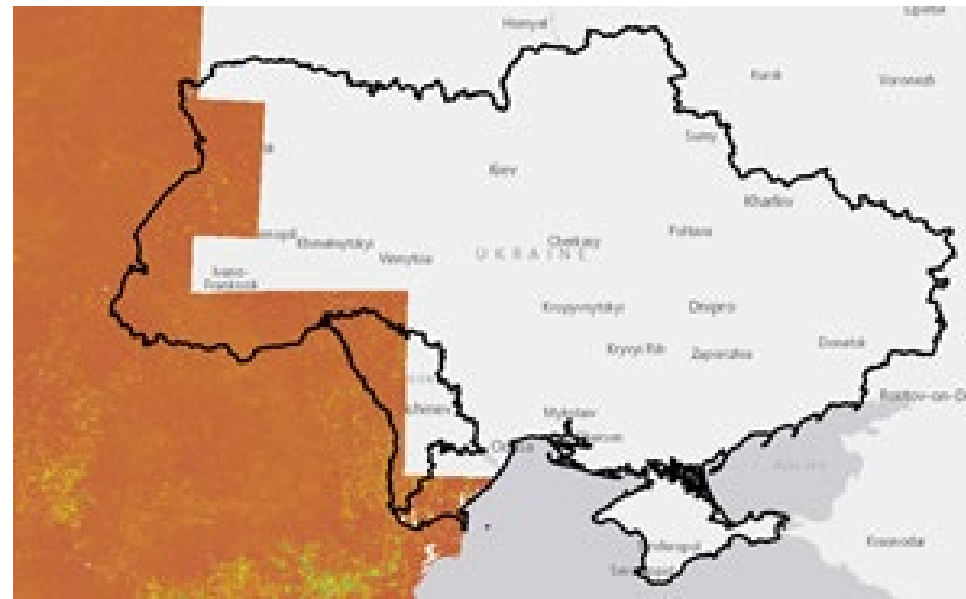
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HIGH RESOLUTION VEGETATION PHENOLOGY AND PRODUCTIVITY



HRVPP area (covered by service)



For Ukraine, the available area for a pilot

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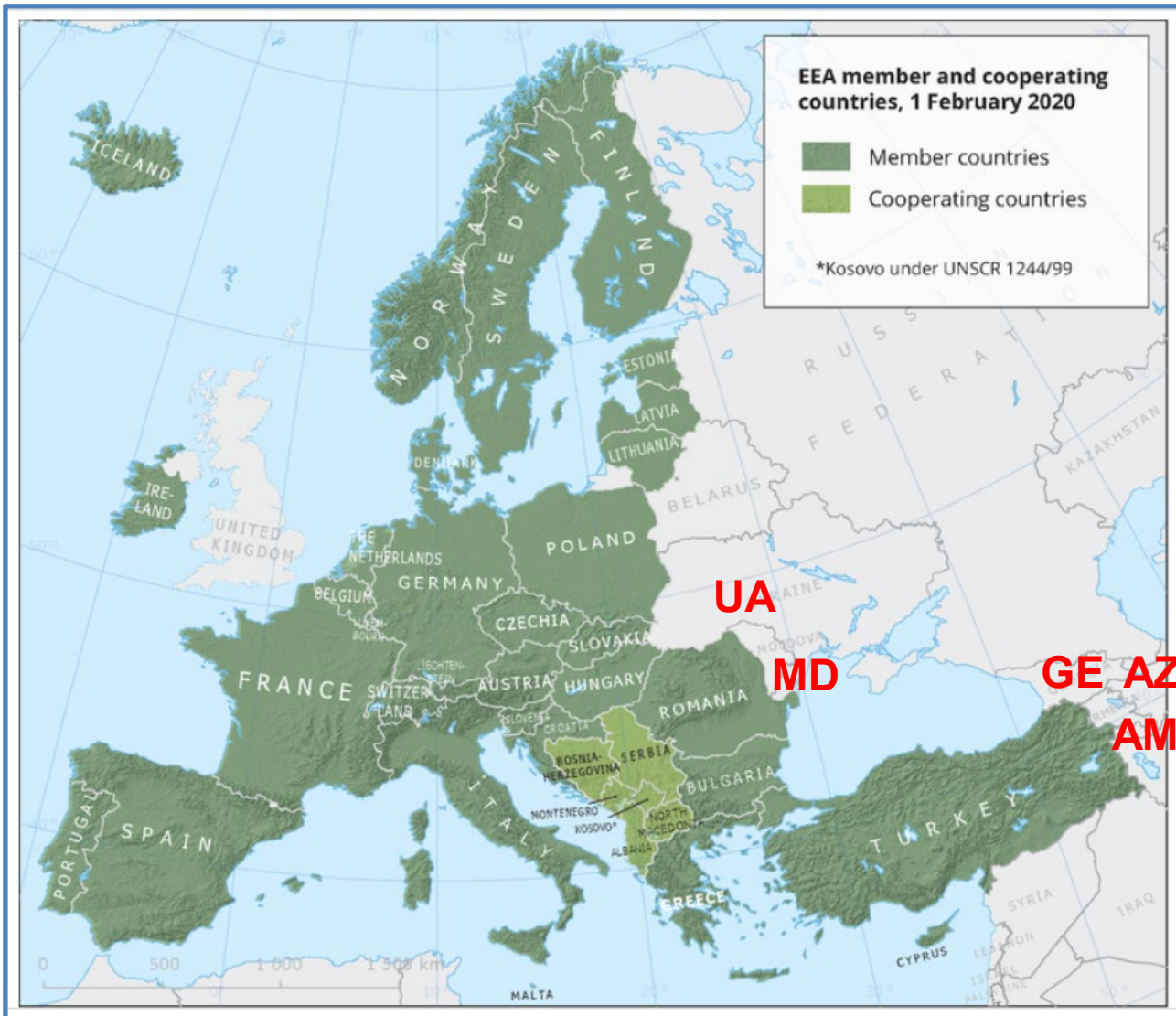
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EUROPEAN ENVIRONMENT AGENCY & EIONET

MEMBER STATES & CO-OPERATING COUNTRIES

→ EU EASTERN PARTNER COUNTRIES

TO JOIN THIS CONTINUOUS CO-OPERATION



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AIR QUALITY MONITORING & DATA MANAGEMENT

Georgia – up-to-date air quality data according European Air Quality index

Tbilisi (AGMS)

Location: **David Agmashenebeli Avenue 73a**

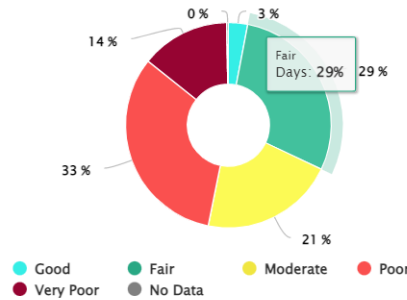
Latitude: **41.7088**

Longitude: **44.7997**

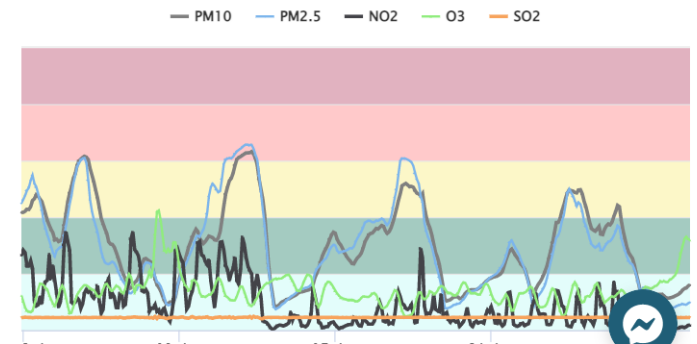
Station Type: ქალაქის ფონური სადგური

Description: In Tbilisi Atmospheric Air Pollution Monitoring Automatic Station is located on David Agmashenebeli ave. 73a near the Ilija Garden. The station operated since April 2019. At the station the following parameters are measured: PM10, PM2.5, SO2, NO, NOx, NO2, O3, CO and meteorological parameters.

Air quality by last 365 days
Substance: All



Time Series



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AIR QUALITY MONITORING & DATA MANAGEMENT

- Azerbaijan can share data of up to 5-6 automated monitoring stations – interested to test European Air Quality index for national use
- Moldova has installed first automated monitoring station – data can be shared after introduction of data management software
- Major investments needed into automated stations for Moldova (planned with EU financing) and Armenia (option of Worldbank financing)
- Thursday 11 May – Regional online workshop with WHO on communicating health effects of fine particulate matter pollutionn – aim to involve municipalities in awareness raising actions

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