



EU4Environment
Water and Data in Eastern Partner Countries

THE EU4ENVIRONMENT WATER & DATA PROJECT LAND MONITORING IN UKRAINE

9th Meeting of the Carpathian Convention Working Group
on Sustainable Forest Management
16 May 2023, Online

Umweltbundesamt, Isabella Greimeister-Pfeil

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PROGRAM OVERVIEW

European Union for Environment in Eastern Partnership countries

– Water Resources and Environmental Data

- based on the ENI East Regional Action Programme 2020 (15 Dec 2020)
- Armenia, Azerbaijan, Georgia, Republic of Moldova, [Ukraine](#)
- implementation until **June 2024**
- Implementation by UBA and ADA with OiEau, OECD and UNECE

Goals:

- Improved environmental, climate and socio-economic resilience, and human health
- Build on EUWI+ and on SEIS II in 2 components:
 - Strengthen governance and capacity for **integrated water resources management**
 - Extend the **environmental database** for knowledge-based decision-making and the access to **open data**

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OUTPUTS LEAD



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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Component 1 Water Resources

Component 2 Environmental Data

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EU4ENVIRONMENT WATER & DATA – OUTPUT 2.2



Capacity building: use of **open Earth observation data** for environmental applications

Data generation:
production/extension of the **Corine Land Cover** layer

umweltbundesamt^U
PERSPEKTIVEN FÜR UMWELT & GESELLSCHAFT

• **Lechner
Tudásközpont**

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COPERNICUS: « EUROPE'S EYES ON EARTH »

- European Earth observation programme: <https://www.copernicus.eu/en>
- Provider of satellite imagery, value-added data and operational services
- All datasets and services are free for all users
- Used to monitor and combat the challenges of our times
 - Climate change, biodiversity loss, monitoring of environments...

COPERNICUS SERVICES



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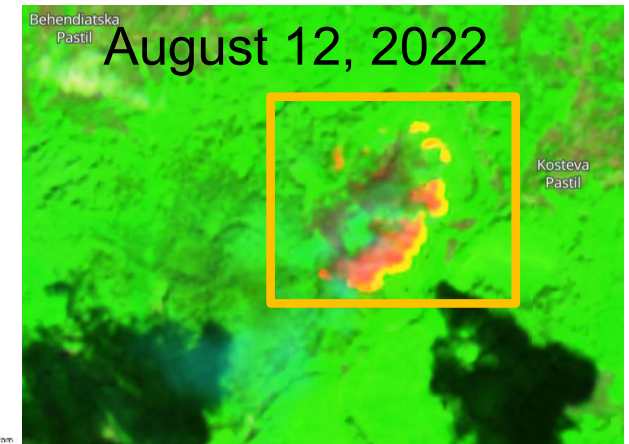
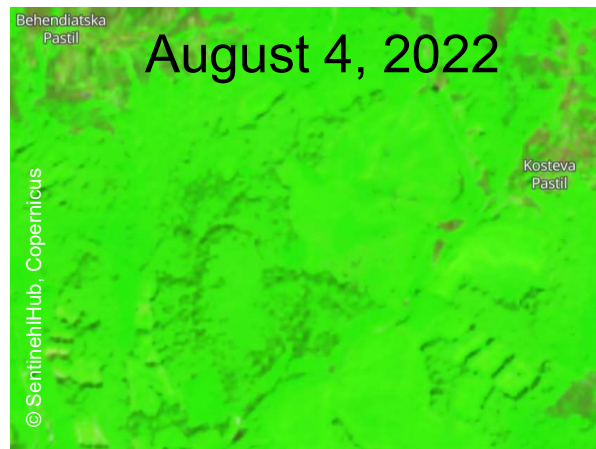
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HANDS-ON TRAINING WORKSHOP

- **Workshop** with thematic experts, stakeholders, decisionmakers, practitioners who would like to learn more about the use of EO data
- **Introduction to Copernicus** services and data access
- **Case studies**
 - Vegetation health dynamics in forest ecosystems (Chernobyl exclusion zone, Trans-carpathian region)
 - Temporal relationships between the occurrence of droughts and wildfires (Trans-carpathian region)
- **Example:** Major wildfires on Mount Savchyn in August 2022
 - Sentinel-2 short-wave infrared channel

<https://www.ukrinform.net/rubric-emergencies/3549589-forest-fire-navige-zakarpattarregion-planes-and-helicopters-operating.html>



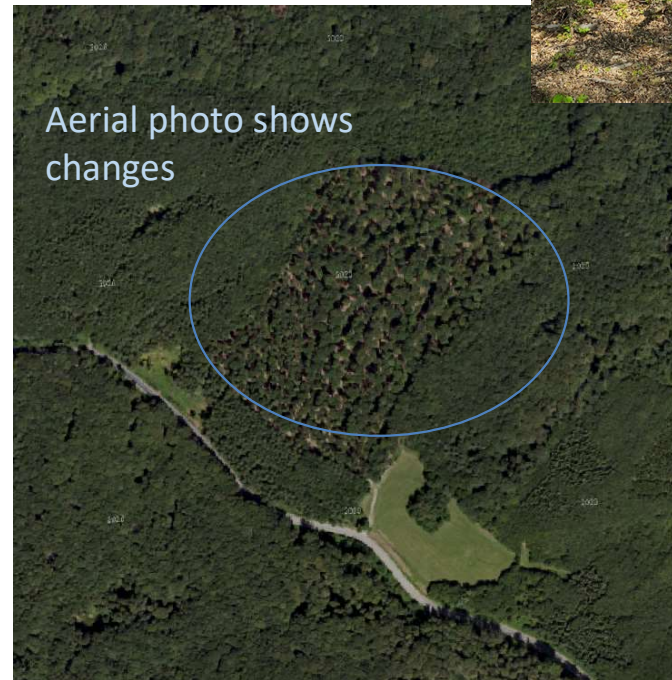


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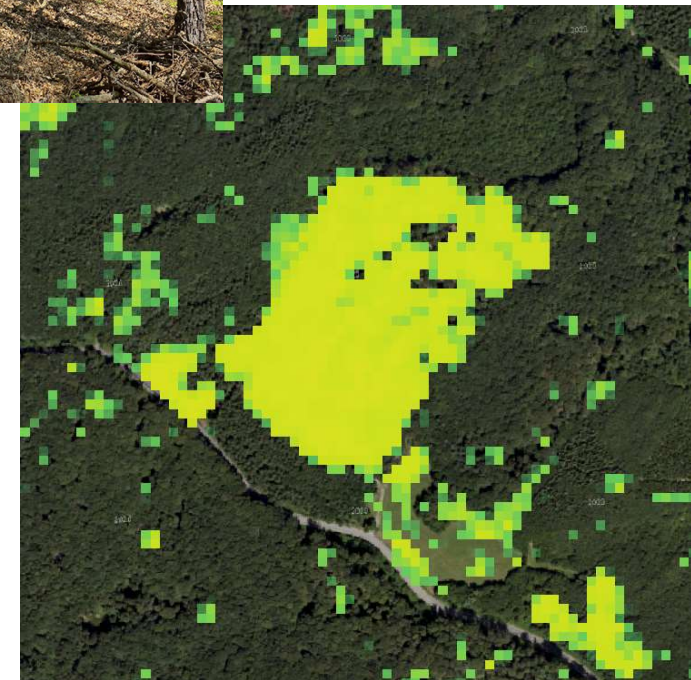
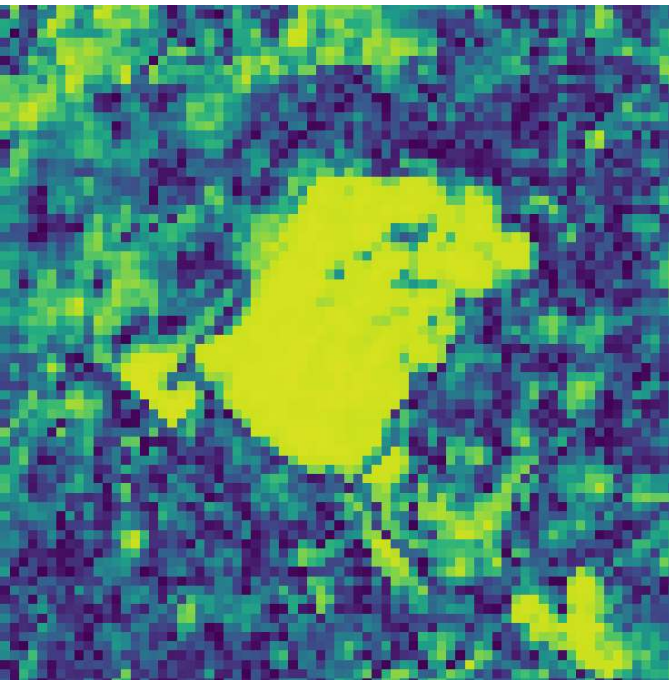
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HR-VPP BIOMASS CHANGE MAPPING

- Copernicus high resolution vegetation phenology & productivity layer (HR-VPP)¹
- Yellow area: large changes in seasonal productivity (2018 to 2020)



Aerial photo shows changes



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¹ <https://land.copernicus.eu/pan-european/biophysical-parameters/high-resolution-vegetation-phenology-and-productivity>

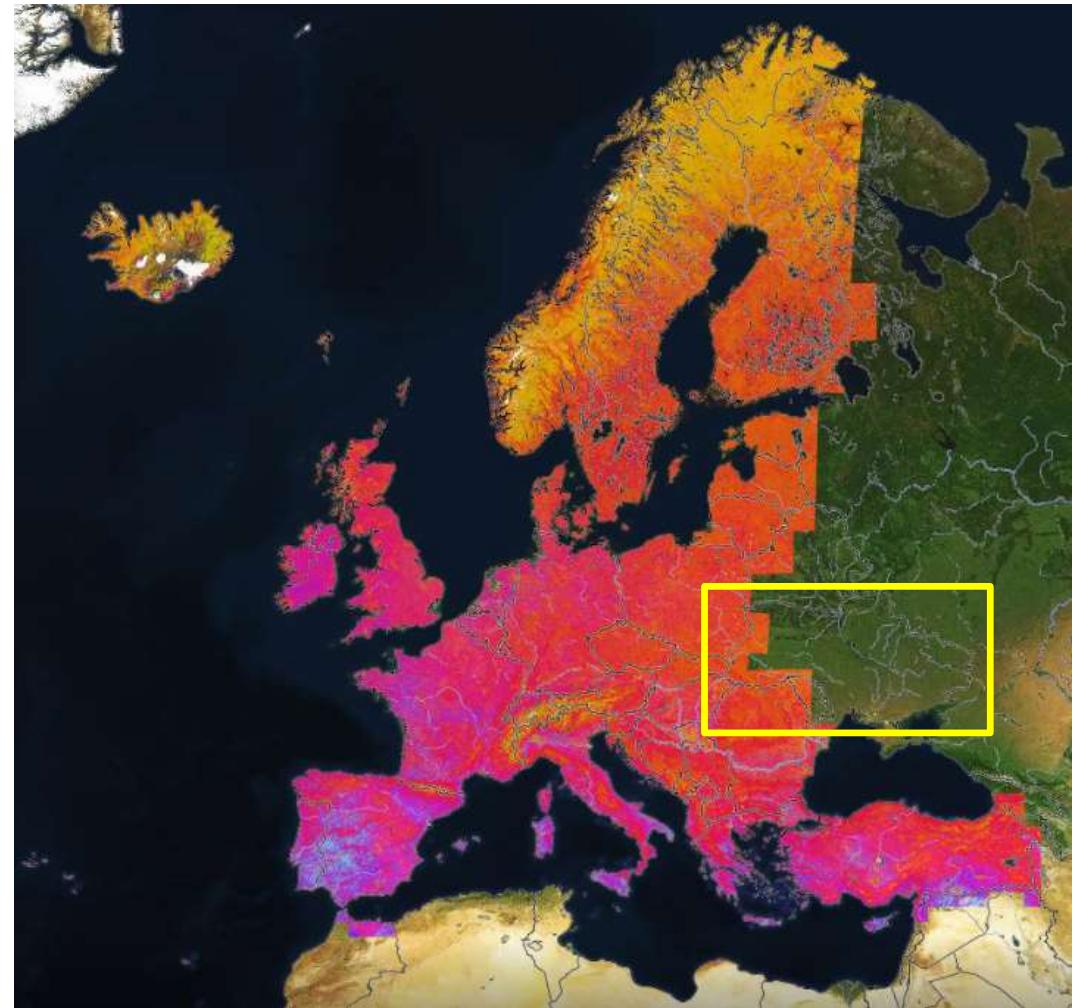


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Corine Land Cover² (CLC) in Ukraine

ENI EAST:

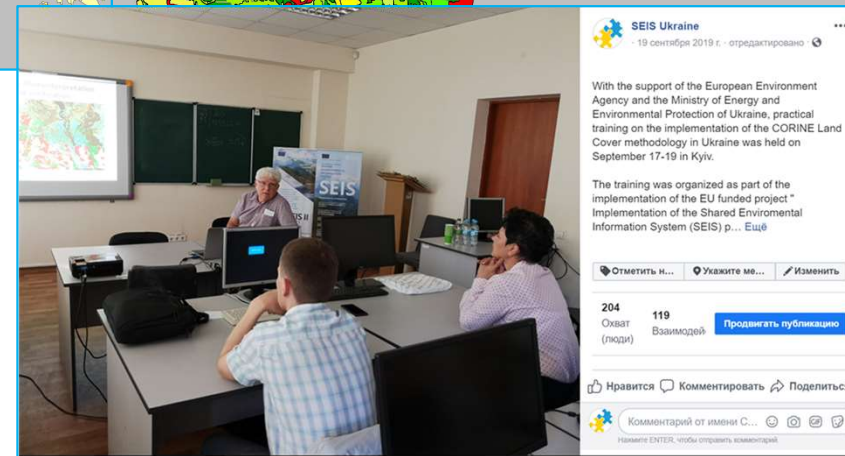
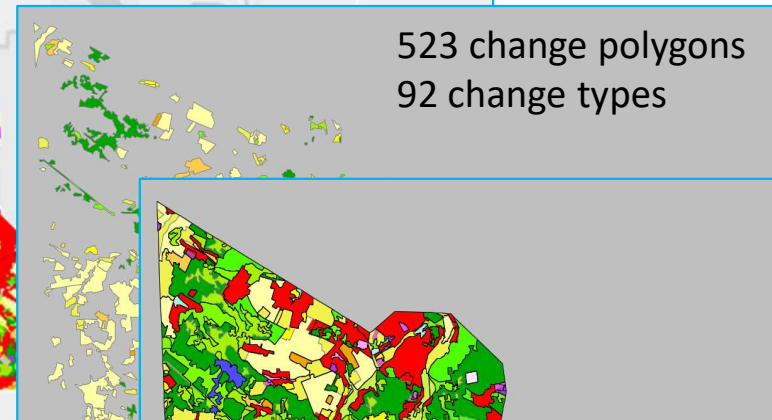
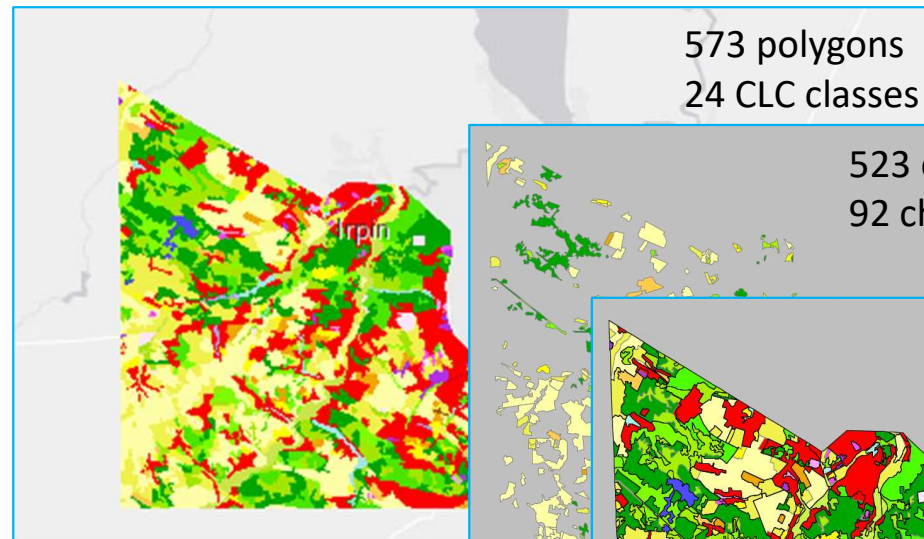
- CLC2018 status layer
- CLC-Change₂₀₀₅₋₂₀₁₈
- Backdated CLC2005

For a pilot area around Kyiv (1.586 km²)

EU4ENV:

- CLC2023 status layer
- CLC-Change₂₀₁₇₋₂₀₂₃ (*backward change mapping*)
- backdated CLC2017 status layer

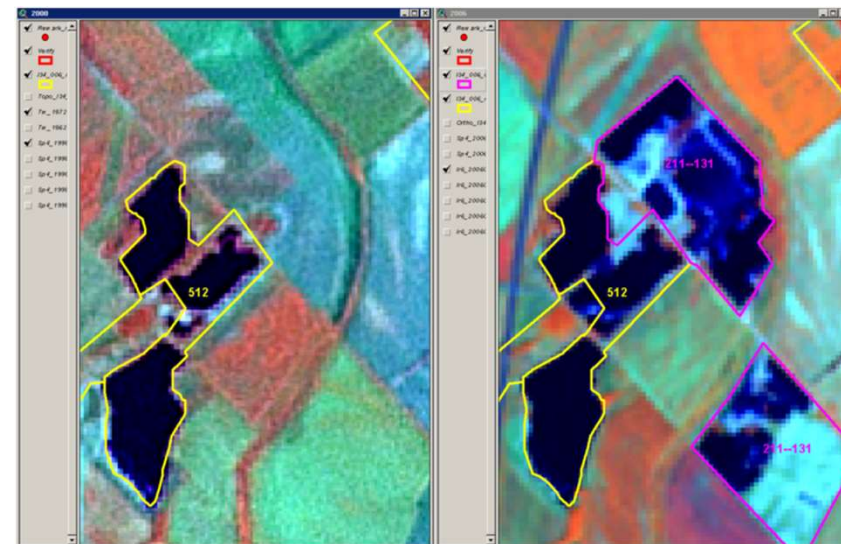
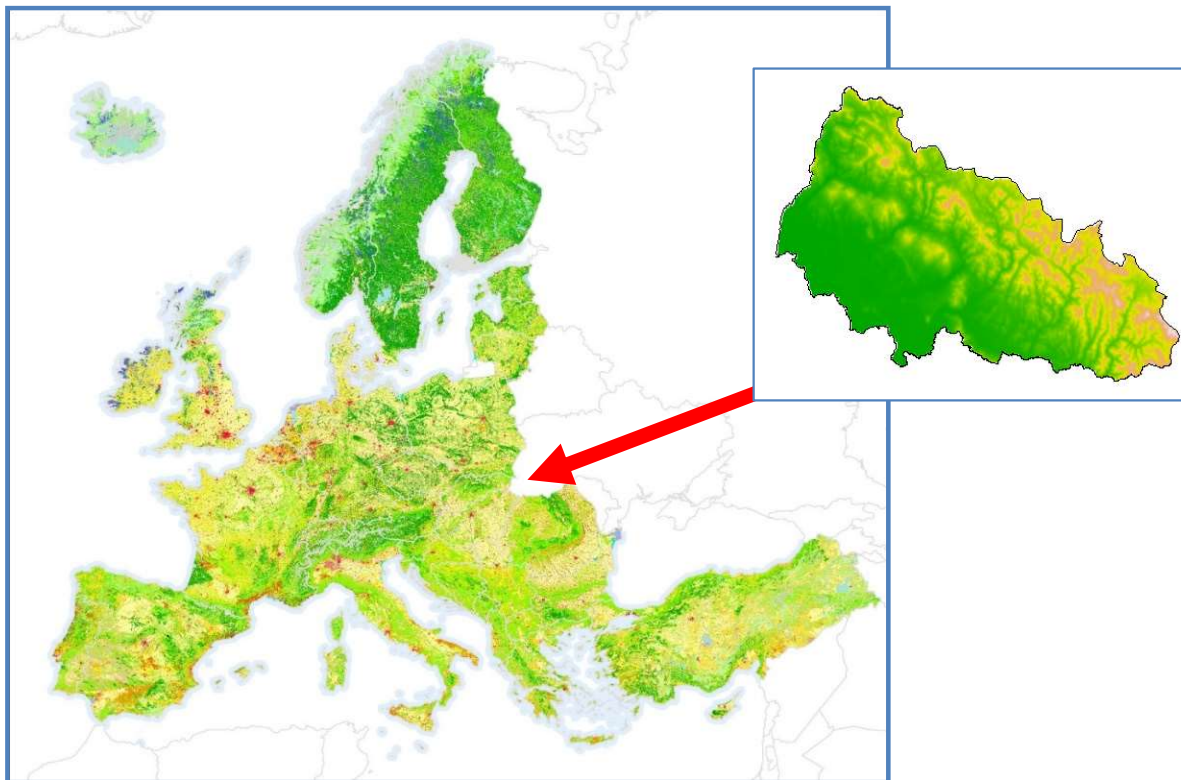
for the Carpathian Region (27.000 km²)



² <https://land.copernicus.eu/pan-european/corine-land-cover>

CLC2023 IN UKRAINE

- CLC Standard: 44 classes, 25 ha MMU for status layer / 5 ha for change layer
- Method: Computer-aided visual photointerpretation using a custom-made software (INTERCHANGE)
- Changes mapped based on visual comparison of satellite images from two reference dates (2017 and 2022/23)
- For the Carpathian region (27.000 KM²)
- Foreseen completion: Q2 2024





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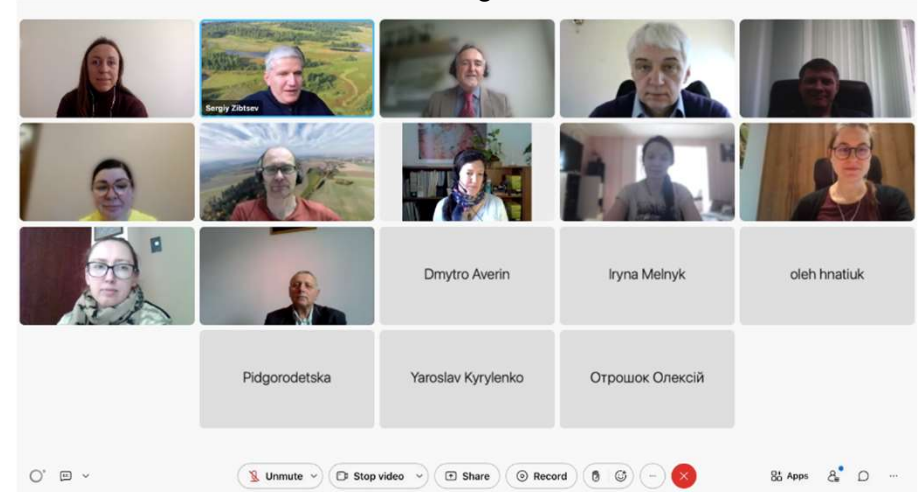
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SUMMARY

- Close collaboration with Ukrainian experts to enable and sustain effective implementation of this EU Programme
 - Reviewing existing capacities
 - Increasing cross-sector coordination and cooperation
 - Facilitating coordination and cooperation with relevant stakeholders
-
- Training workshop on use of EO data
 - Extension of the Corine Land Cover dataset

Thank you!

First technical meeting in March 2023



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<https://www.eu4waterdata.eu/>

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