

# CERTIFICATE



## ANASTASIIA PYROGOVA

has successfully completed the international workshop

“Standardization of Professional Development Courses, Digital Tools, and Mutual Expertise”

held from 10 to 14 November 2025  
under Erasmus+ ClimEd Project

“Multilevel Local, Nation- and Regionwide Education and Training in  
Climate Services, Climate Change Adaptation and Mitigation”  
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Hanna K. Lappalainen

University of Helsinki



Andrii Smitiukh

Odesa I. Mechnikov National University



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## Lectures

- 1 Global Warming, Greenhouse Gases, and Climate Change Indicators on Earth
- 2 Water Resources of Ukraine under Current Climate Change Conditions and Future Scenarios
- 3 Green Constitutions: Origins and Positive Effects
- 4 Planetary Boundaries: Concept, Indicators, and Challenges
- 5 Hazardous Hydrological Phenomena on Rivers under Climate Change Conditions
- 6 Climate Raster Data
- 7 Climate Change: Modeling of Possible Consequences
- 8 Climate and Non-Communicable Diseases: Emerging Risks for Public Health
- 9 Spatial Modelling of Climate Vulnerability and Risks

## Learning Outcomes Achieved

upon successful completion of the workshop

### **“Standardization of Professional Development Courses, Digital Tools, and Mutual Expertise”**

the participant has demonstrated the ability to:

- 1 Analyse contemporary climate change processes and their sectoral impacts, including hydrological, environmental, and public health risks, using interdisciplinary approaches.
- 2 Apply spatial and digital tools, including climate raster datasets and GIS-based methods, for the assessment of climate vulnerability and risk.
- 3 Develop and standardise professional development courses in alignment with defined learning outcomes, quality assurance principles, and adult learning (andragogical) methodologies.
- 4 Integrate unified visual identity standards, digital learning tools, and peer-review mechanisms into collaborative course development within an international academic framework.

## Practical Workshops

- 1 Spatial Processing of Climate Raster Data in QGIS
- 2 Assessment of Spatial Vulnerability of Territories to Climate Change

## Round Table Discussions

- 3 Joint Development and Mutual Learning among Teams
- 4 Designing Courses Based on the Principles of Adult Learning (Andragogy)
- 5 Unified Visual Style and Course Branding
- 6 Digital Tools for Course Development and Interactive Learning
- 7 Course Peer Review
- 8 Summary of Key Results. Final Discussion. Future Collaboration