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EU4 Green Recovery East (700002623)

Recovery through a Circular Economy and Pollution Reduction in the Eastern Partnership countries

TERMS OF REFERENCE

SUPPORT FOR THE IMPLEMENTATION OF A RISK-BASED SCREENING AND PRIORITISATION FRAMEWORK FOR NITRATE VULNERABLE ZONES (NVZ) IN UKRAINE

1. Background

The EU4Green Recovery East (EU4GRE) is a regional Programme funded by the European Union to support Eastern Partnership countries in transitioning to a circular economy, improving water management, strengthening environmental data systems, aligning with the EU environmental acquis, and enhancing cross-border cooperation. The Programme builds on more than a decade of EU support for integrated water management and green economy adoption.

Ukraine is implementing Council Directive 91/676/EEC concerning the protection of waters against pollution by nitrates from agricultural sources (Nitrates Directive). Practical implementation of Nitrate Vulnerable Zone (NVZ) designation is hampered by limited monitoring coverage and incomplete historical datasets. To overcome these challenges, the competent authorities developed a risk-based methodology combining monitoring information, agricultural pressure indicators, nitrogen surplus calculations, GIS analysis and SWAT/SWAT+ modelling. The methodology is intended as a screening and prioritisation framework to identify areas with high vulnerability to nitrate pollution for targeted monitoring.

In expert exchanges under EU4GRE, it was recognised that a substantial share of the effort relates to digitalising and harmonising analogue maps and datasets. Assistance with map digitalisation could significantly accelerate NVZ designation. The modelling component will be implemented separately by a public institution; the service contract described herein therefore focuses on data collection, digitalisation and geospatial database development.

2. Purpose

The purpose of this assignment is to support the Ukrainian authorities in establishing the technical and data foundation required for the implementation of the Nitrates Directive and the future designation of Nitrate Vulnerable Zones (NVZs), with a focus on surface waters. The service provider will compile, digitise, harmonise, and document all available environmental,

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hydrological, agricultural, and surface water quality datasets into a unified geospatial platform and NVZ geodatabase, while documenting existing data gaps where information is unavailable.

The integrated geodatabase shall serve as a long-term national information resource supporting NVZ designation, Water Framework Directive (WFD) implementation, and regular updates as new monitoring data become available. Beyond supporting future NVZ assessment and modelling activities, the outputs of this assignment will also contribute to broader water management objectives, including the preparation and updating of River Basin Management Plans (RBMPs), the identification and filling of recognised data gaps, the improvement of pressures and impacts assessments, the strengthening of water monitoring programmes, and the enhancement of national environmental data management and reporting systems. The assignment therefore contributes both to the implementation of the Nitrates Directive and to the objectives of integrated river basin management under the Water Framework Directive and related EU environmental legislation.

3. Financing

European Union

4. Procedure

EF Procurement rules

5. Contracting Authority

International Office for Water (OiEau) --- France

6. Nature of contract

Lumpsum Service contract

7. Time period of implementation

November 2026 - April 2027

8. Maximum contract value

15 000 €

9. Scope of work

The service provider will carry out the following key activities:

- Data Inventory and Gap Assessment: Review all available datasets relevant to nitrate pollution assessment, including surface water monitoring data, agricultural statistics, land use information, soil and geological maps, hydrological data, administrative boundaries,

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river basin and waterbodies boundaries. Annex 1 provides an indicative list of datasets that serves as a theoretical basis for this data inventory, which can be reviewed, commented on, and complemented during the process. The contractor will compile, harmonise, and document all available datasets while documenting existing data gaps where information is unavailable. To enable the identification of the necessary sources for Nitrate Vulnerable Zones (NVZ), metadata must be provided in the attached PDF format (in both English and Ukrainian). Assess data quality, completeness and spatial coverage; identify critical gaps; and prepare a data gap assessment report.

- Digitalisation and Harmonisation of Spatial Data: Collect, scan, georeference and digitise historical soil, land use maps; digitise monitoring station locations, protected areas and water abstraction zones; harmonise the spatial datasets to national standards; and prepare a metadata catalogue. Where feasible, propose automated solutions for bulk digitalisation to optimise the workload.
- Development of an Integrated NVZ Geodatabase: Integrate all digitised spatial and statistical data — collected in their native or initial format whenever possible— including agricultural pressure indicators, nitrogen surplus calculations and surface water monitoring information. The geodatabase shall serve as a long-term national information resource supporting NVZ designation, Water Framework Directive (WFD) implementation, and regular updates as new monitoring data become available. The database shall support future updates, enable overlay analyses required by the risk-based methodology, and provide datasets for further modelling by the designated public institution.

10. Deliverables and deadlines

The contractor is expected to deliver the following outputs:

- D1. Data Inventory and Gap Assessment Report – summarising available datasets, quality assessments and identified gaps, metadata in English and Ukrainian languages (Month 2)
- D2. Digitised Geospatial Dataset Package – scanned, georeferenced and digitised maps and vector layers with accompanying metadata (Month 5)
- D3. Integrated NVZ Geodatabase and User Guide – geodatabase with documentation and import/export procedures (Month 6)

Deliverable	Deadline
Data Inventory and Gap Assessment Report – summarising available datasets, quality assessments and identified gaps. This deliverable must include the metadata provided in the specified PDF format (in English and Ukrainian) to allow the identification of the necessary sources for NVZ	Month 2
Digitised Geospatial Dataset Package – scanned, georeferenced and digitised maps and vector layers with accompanying metadata	Month 5
Integrated NVZ Geodatabase and User Guide – geodatabase with documentation and import/export procedures	Month 6



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11. Payment modalities

Payment will be made according to the following schedule:

- 25% of the total contract amount - upon signature of the contract;
- 40 % of the total contract amount - upon submission and acceptance of Deliverable 2;
- 35% of the total contract amount - upon submission and acceptance of all deliverables.

Payment will be transferred via bank wire to the EUR account specified in the quotation.

12. Participation to the tender

Interested service providers are invited to inquire the tender dossier by email from

- Ms. Ilke CICEKOGLU, project assistant: i.cicekoglu@oieau.fr

The tender file includes the below mentioned documents:

- Terms of References (0)
- Service Contract Notice (A)
- Instructions to tenderers (B)
- Tender Submission Form (B1)
- Legal Identification Form (B2)
- Declaration of Honour (B3)
- Financial Identification form (B4)
- Financial offer form (B5)
- Technical offer with proposed methodology and implementation schedule
- CVs of the proposed key experts.

Deadline for submission of the technical and financial offer is 29 October 2026, 18:00 CET.

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Annex 1. Indicative List of Datasets for NVZ Establishment

A. Hydrological and Water Bodies Data

A1. Surface Water Bodies

- River network (vector)
- Water Framework Directive (WFD) surface water body delineation (Polylines and polygons)
- Lakes and reservoirs
- Transitional and heavily modified water bodies (where applicable)
- River basin district boundaries
- Sub-basin boundaries
- Catchment and sub-catchment delineations
- Wetlands and floodplains
- Protected water bodies

A2. Hydrological Monitoring

- Surface water monitoring stations
- Hydrometric stations
- River discharge records
- Water level records
- Flow regime data
- Long-term hydrological time series

A3. Water Management Infrastructure

- Water abstraction points
- Wastewater discharge points
- Irrigation systems
- Dams and reservoirs
- Hydraulic structures

B. Water Quality Data

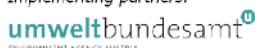
B1. Surface Water Quality

- Nitrate concentrations
- Nitrite concentrations
- Ammonium concentrations
- Total nitrogen concentrations
- Orthophosphate concentrations
- Total phosphorus concentrations
- Supporting physico-chemical parameters

B2. Historical Monitoring Data

- National monitoring datasets
- River Basin Management Plan datasets
- Research project datasets

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- International monitoring datasets where available

C. Agricultural Pressure Data

C1. Land Use and Agricultural Activity

- Agricultural land parcels
- Arable land areas
- Permanent crops
- Grasslands and pastures
- Crop type distribution
- Crop rotation information (where available)

C2. Livestock

- Livestock numbers by administrative unit
- Livestock density maps
- Livestock farm locations
- Industrial livestock facilities

C3. Fertilisation and Nutrient Management

- Mineral fertiliser application statistics
- Organic fertiliser application statistics
- Manure production estimates
- Manure storage facilities
- Nutrient management plans (where available)

C4. Nitrogen Pressure Indicators

- Nitrogen surplus calculations
- Nitrogen balance data
- Nutrient input statistics
- Nutrient output statistics

D. Soil Data

D1. Soil Characteristics

- Soil maps
- Soil texture
- Soil permeability
- Soil organic matter
- Soil depth
- Soil drainage characteristics

D2. Soil Vulnerability

- Erosion risk maps
- Soil vulnerability maps
- Agricultural suitability maps

E. Topography and Remote Sensing Data

E1. Terrain Data

- Digital Elevation Model (DEM)
- Slope maps

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E2. Remote Sensing

- Land cover datasets
- Satellite-derived land use products
- Vegetation indices
- Agricultural monitoring products

F. Administrative and Reference Data

F1. Administrative Boundaries

- National boundaries
- Oblast boundaries
- Raion boundaries
- Territorial community boundaries

F2. Protected Areas

- Protected areas
- Natura 2000 equivalent sites (where applicable)
- Water protection zones
- Environmentally sensitive areas

F3. Reference Datasets

- Geodetic reference layers
- Transport network
- Settlements
- Population distribution

G. Existing Environmental Information Systems

The Contractor shall assess the availability, accessibility and interoperability of data from:

- State Agency of Water Resources databases;
- State Water Cadastre;
- Hydrometeorological Service databases;
- Agricultural statistics databases;
- Environmental monitoring systems;
- River Basin Management Plan databases;
- Existing GIS platforms and geoportals.

Expected Output

All identified datasets shall be:

- inventoried and assessed for quality and completeness;
- digitised where only analogue formats exist;
- georeferenced and harmonised;
- documented through metadata;
- integrated into the NVZ Geodatabase;
- prepared for subsequent modelling and NVZ delineation activities to be undertaken by the designated public institution.

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