



Uniting Europe's Energy, Today

CROSS-BORDER SUSTAINABLE RENEWABLE ENERGY ACCELERATION IN UKRAINE - MAPPING SYNERGY RENEWABLE ENERGY ACCELERATION AREAS BETWEEN UKRAINE, EU MEMBER STATES, AND MOLDOVA

## ENVIRONMENTAL AND SPATIAL PLANNING SPECIALIST FINDINGS

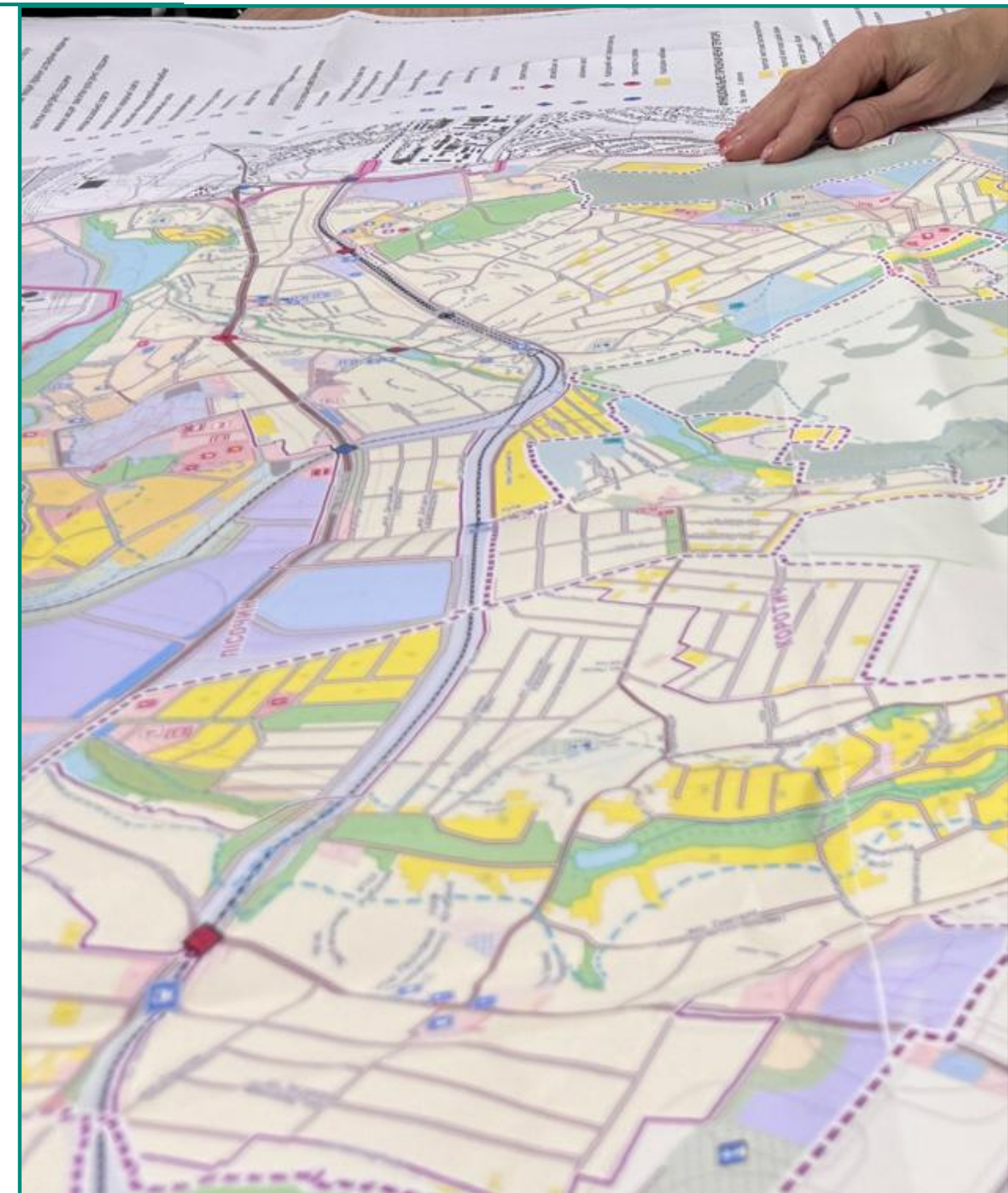
by Anastasiia Oleshchenko & Viktor Putrenko

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# SPATIAL PLANNING SYSTEM IN UKRAINE

## ✓ 3-level hierarchical system

- national – the General Scheme of Planning of the Territory of Ukraine (2002) is outdated since 2021
- regional – schemes of planning of the territories of oblasts:
  - Lvivska – 2009
  - Zakarpatska – 2013
  - Ivano-Frankivska – 2017
  - Chernivetska – 2012
  - Vinnytska – 2013
- local – master plans of settlements and detailed plans of territories
  -  comprehensive plans of spatial planning of the territories of territorial communities
    - considers environmental, social, economic, property, engineering aspects, and integrates SEA
    - based on integrated planning approach with broad involvement of stakeholders



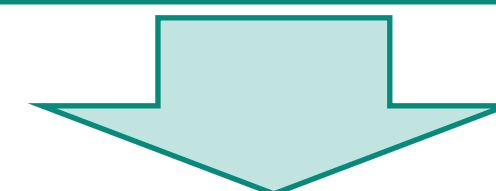
# REAAs PLANNING

## Background / Considering

- ✓ The revised Renewable Energy Directive (2018, amended 2023)
- ✓ The Operational Blueprint for designation of Renewables Acceleration Areas was prepared by the Energy Community Secretariat and The Nature Conservancy
- ✓ Ukrainian regulations, practices, conditions



**Environmental  
impact**



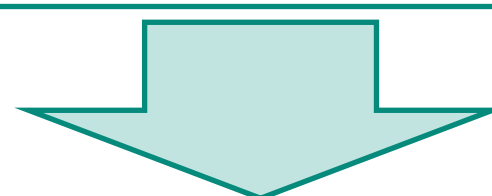
**Renewable energy  
potential**



**Renewable energy  
demand**

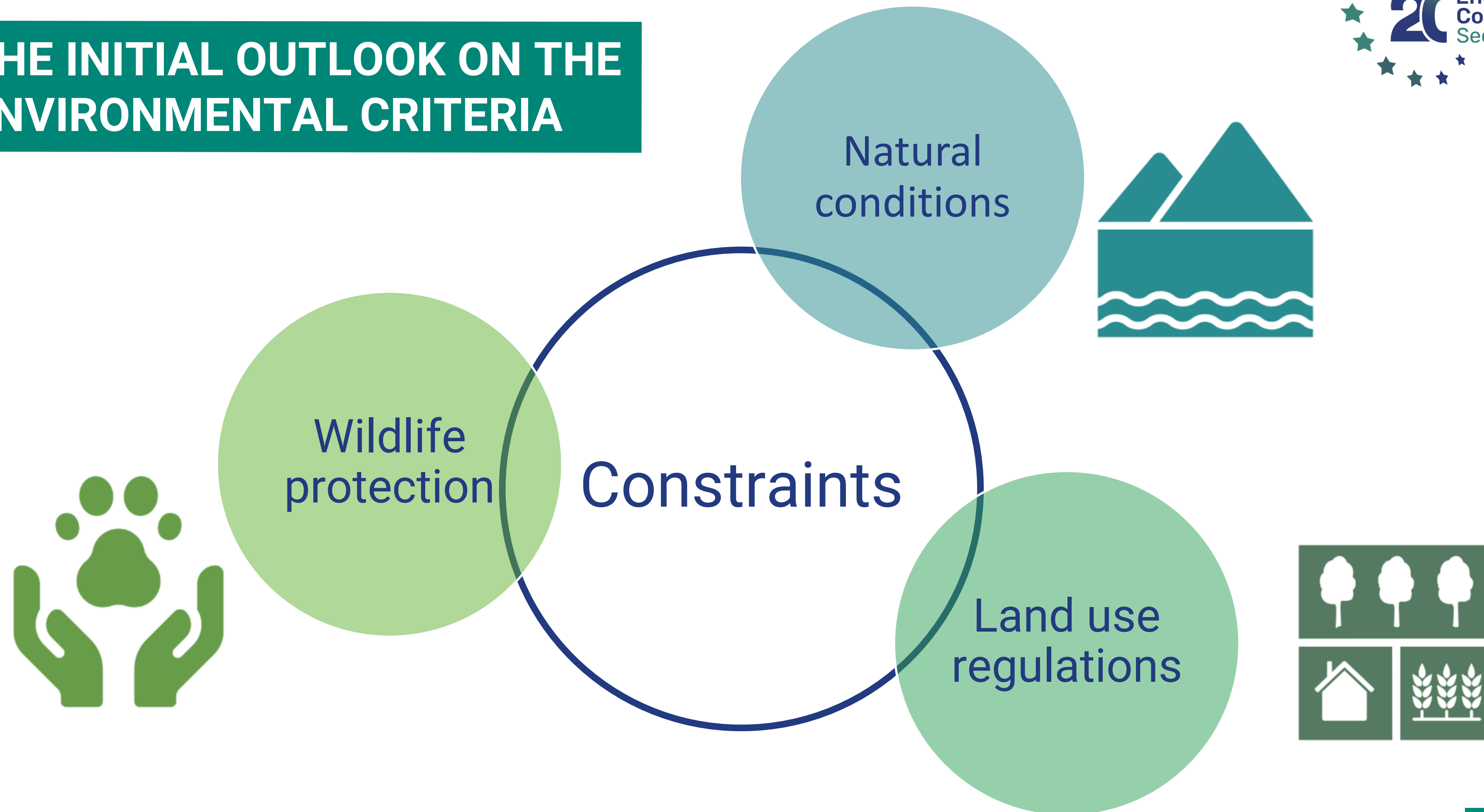


**Infrastructure  
accessibility**



**Social and economic  
impact**

# THE INITIAL OUTLOOK ON THE ENVIRONMENTAL CRITERIA



## NATURAL CONDITIONS

- steep slopes
- elevation
- areas prone to flooding

## WILDLIFE PROTECTION

### + buffer zones

Depending on power plant  
capacity and used technologies

- Nature Reserved Fund
- Emerald Network Sites
- Ramsar Sites
- UNESCO Biosphere Reserves
- peatlands
- locations of observations of endangered species
- migratory routes

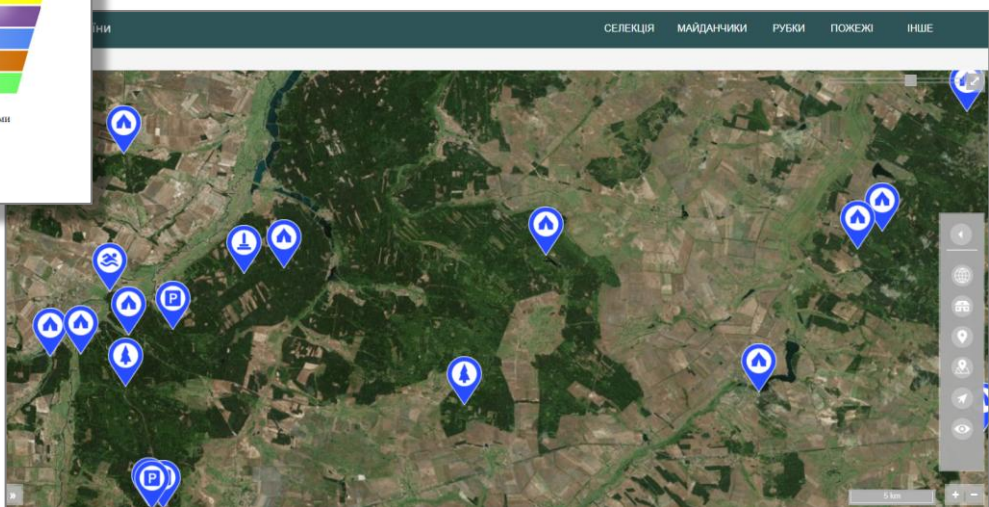
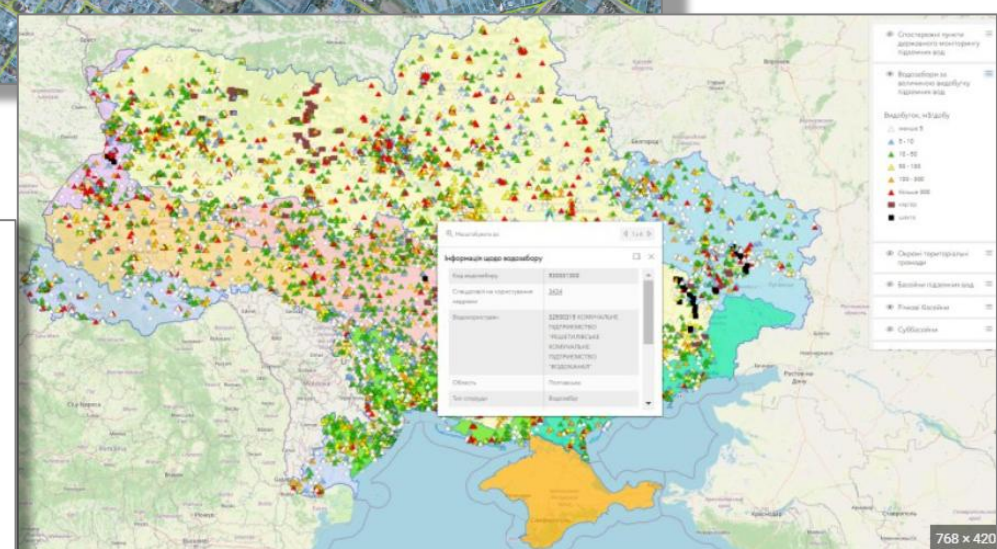
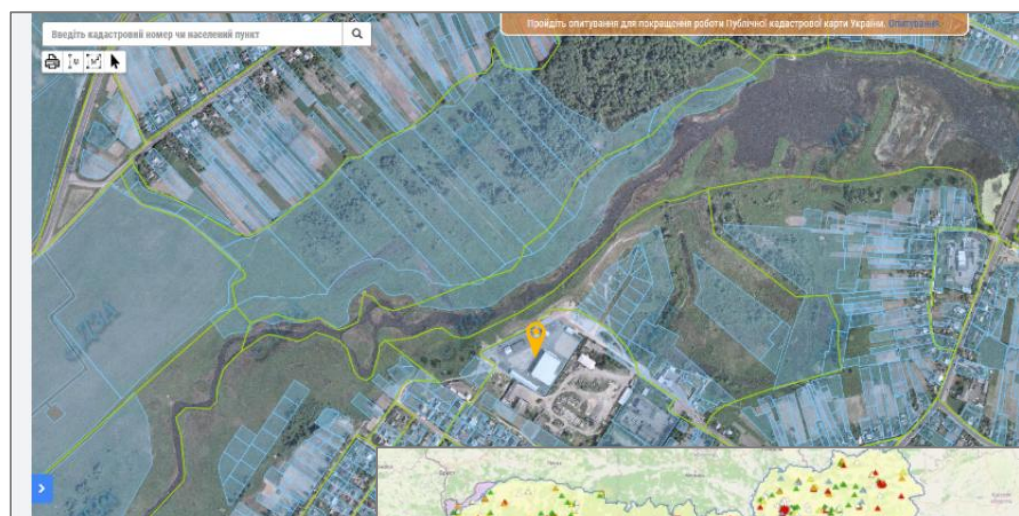
## LAND USE REGULATIONS

- areas of forest fund
- areas of water fund
- agricultural lands
- recreational lands

# GIS DATA SOURCES

DATA SOURCES	EXAMPLES
International	OSM Satellite data Catalogs and data services UN data
National	National Geospatial Data Infrastructure Land and other cadastres National registers Administrative-territorial structure
Local	Topographic maps and plans Spatial planning documents Land management and urban planning documentation

# MAIN UKRAINIAN DATA SERVICES



- Public Cadastral Map
- National Geospatial Data Infrastructure geoportal
- regional and local data geoportals
- Cadastre of Nature-Protected Territories
- Cadastre of Mineral Resources
- State Cadastre of the Animal Wildlife
- State Cadastre of the Plant World
- Red Book of Ukraine
- Geoportal «Forests of Ukraine»
- Atlas of Energy Potential of Renewable Energy Sources of Ukraine



## GIS METHODS FOR MODELING



- Suitability Analysis
- Extraction
- Interpolation
- Overlay
- Buffer Analysis
- Time-Space Analysis
- Network Analysis



**THANK YOU FOR YOUR KIND ATTENTION!**

*Open to discussion and improvement of criteria*



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