



Agency for Geodesy, Cartography
and Cadastre



Cadastral and Spatial Data for Climate Resilience in the Republic of Moldova

PRESENTED BY

Ms. Cristina Telpiz-Burlac

Deputy Head, Real Estate Cadastre Department
Agency for Geodesy, Cartography and Cadastre
Republic of Moldova

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Climate Context



Climate baseline: Temperate-continental climate with long hot summers and short mild winters; mean annual temperature 9–11 °C; annual precipitation 490–620 mm, mostly summer rain.



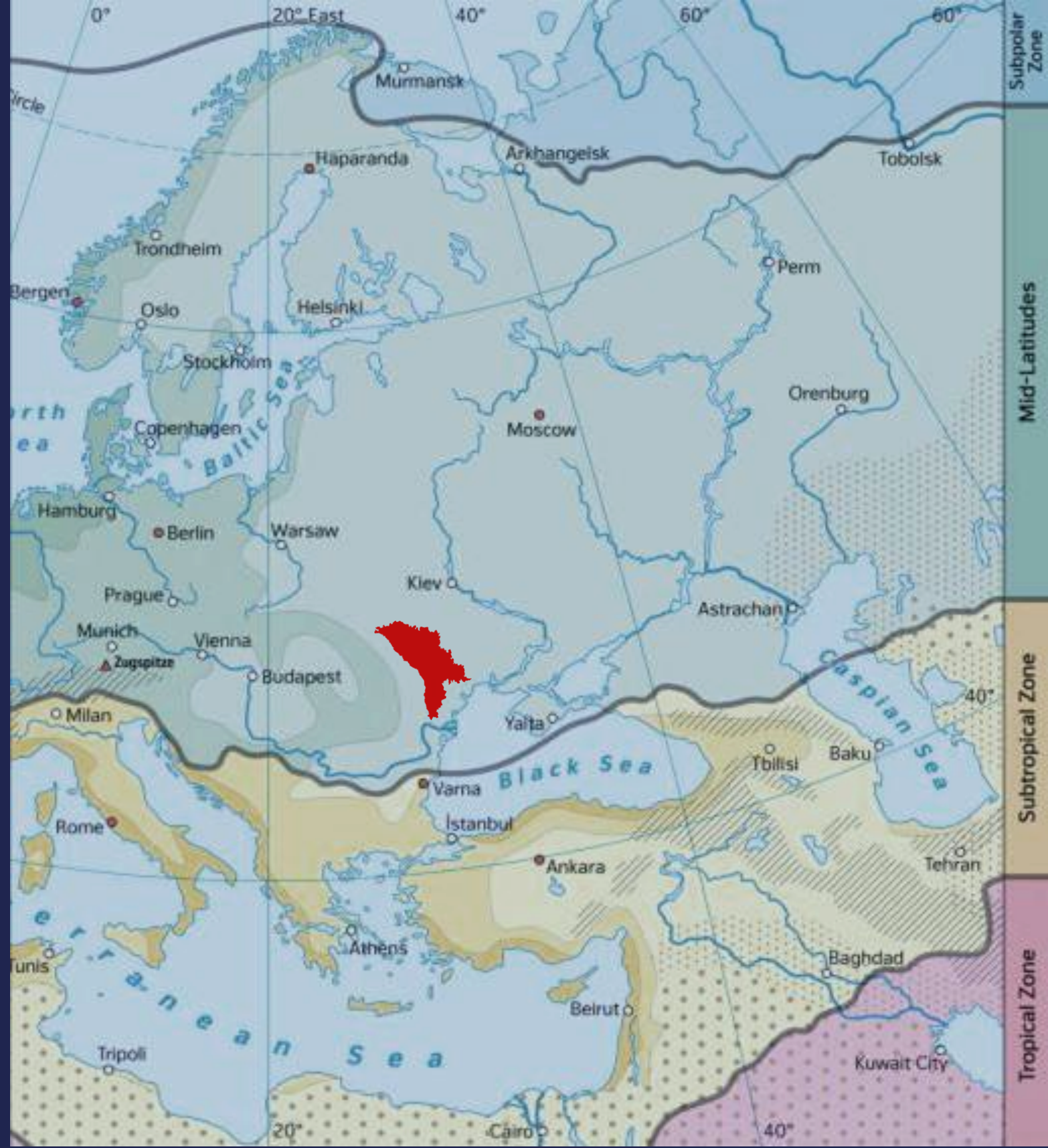
Changing hazards: More frequent **Floods**, prolonged **Droughts**, **Soil Erosion**, **Water Scarcity**, **Winter warming**, **Landslides**, and **thermal shocks** (heatwaves, early/late frosts, freeze–thaw).



Property & infrastructure: Destruction and degradation of buildings and critical networks (transport, water, energy, ICT), cascading service outages, higher repair and insurance costs.



Agriculture (agrarian economy): Crops yield losses and volatility, soil erosion, water stress and higher irrigation demand, crop/livestock stress, more pests and diseases.



The Cadastre's Importance

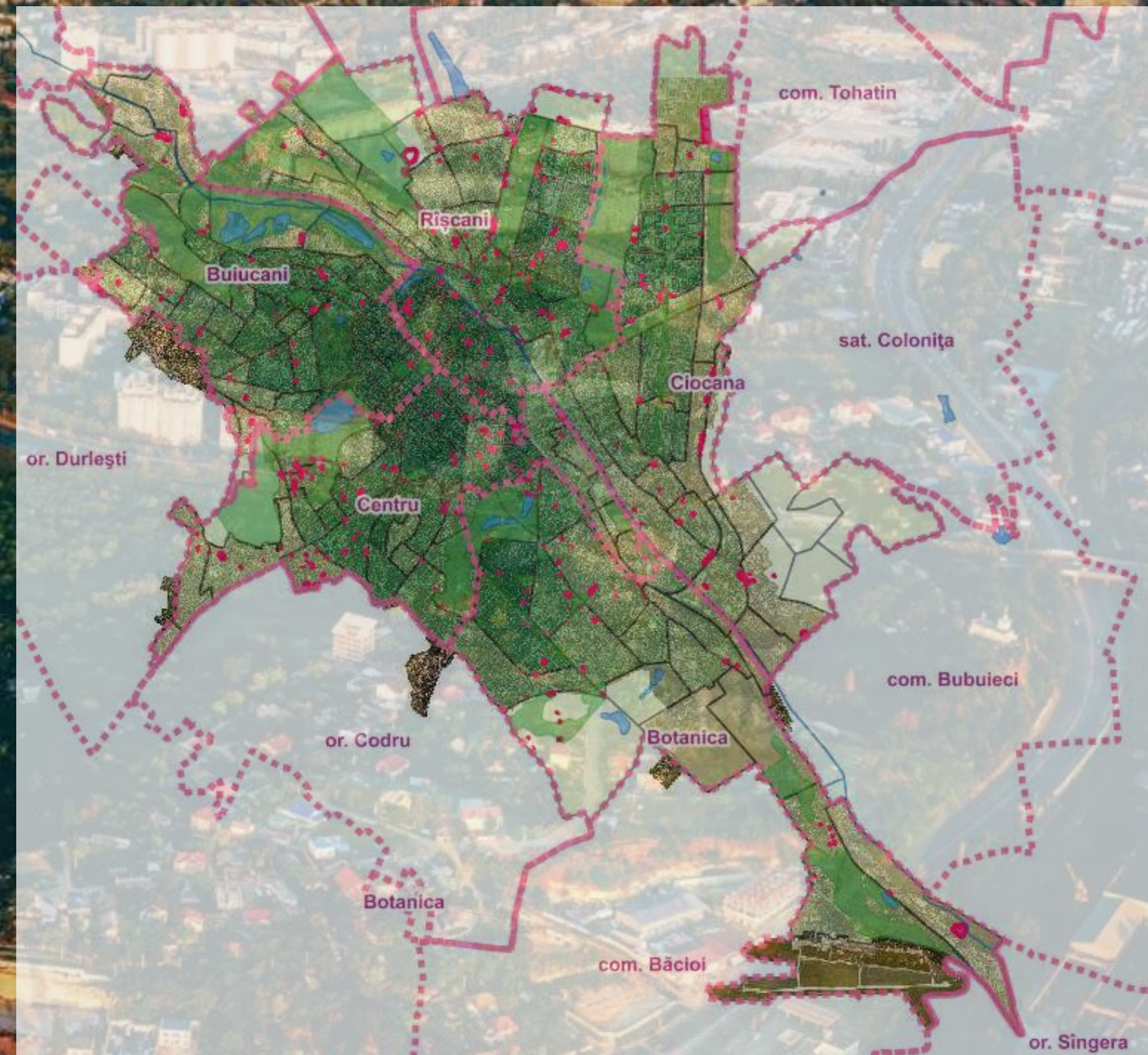
Precise identification of assets and potentially affected persons, by legally referencing the parcel and the building;

Alignment of preventive measures and technical restrictions with the legal status of the land;

Support for post-disaster compensation procedures through the use of spatial data and the analyses based thereon;

Increased transparency and public trust through access to maps and digital services;

Modernization and interconnection of cadastral services with the environment, risk-management and civil-protection sectors, to strengthen national response capacity and resilience.



Institutional Framework

Key actors:

- **Policy makers:** Agency for Geodesy, Cartography and Cadastre and Ministry of Environment
- **Enforcements:** Public Institution Real Estate Cadastre, Hydrometeorological Service, General Inspectorate for Emergency Situations and local public authorities.

Strategic anchors:

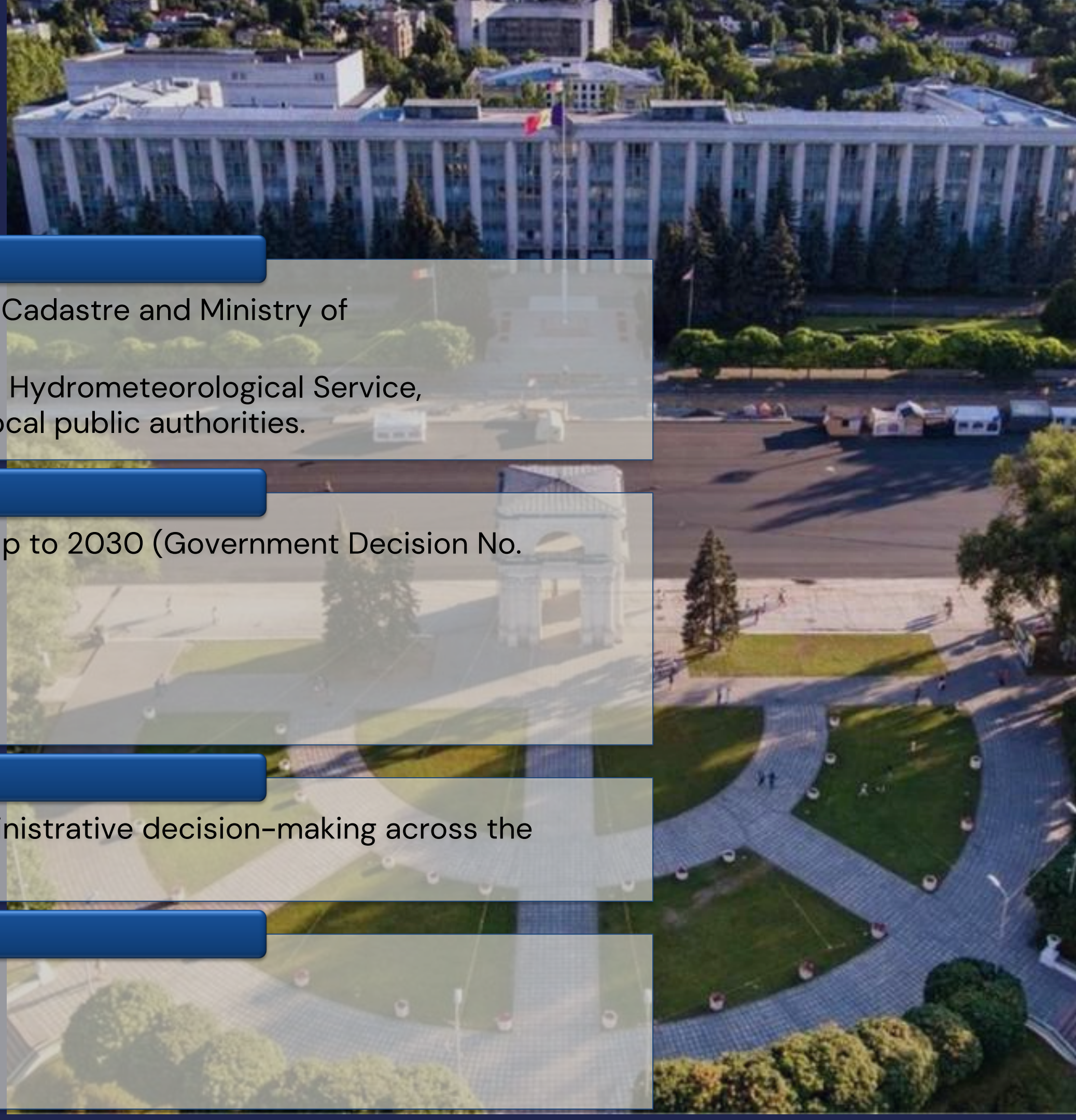
- National Program for Adaptation to Climate Change up to 2030 (Government Decision No. 624/2023);
- climate action measures (Law No. 74/2023);
- hydrometeorological services (Law No. 368/2023);
- SICBI Concept (Government Decision No. 319/2025).

Common objective:

- integrating climate risk into record-keeping and administrative decision-making across the entire policy cycle.

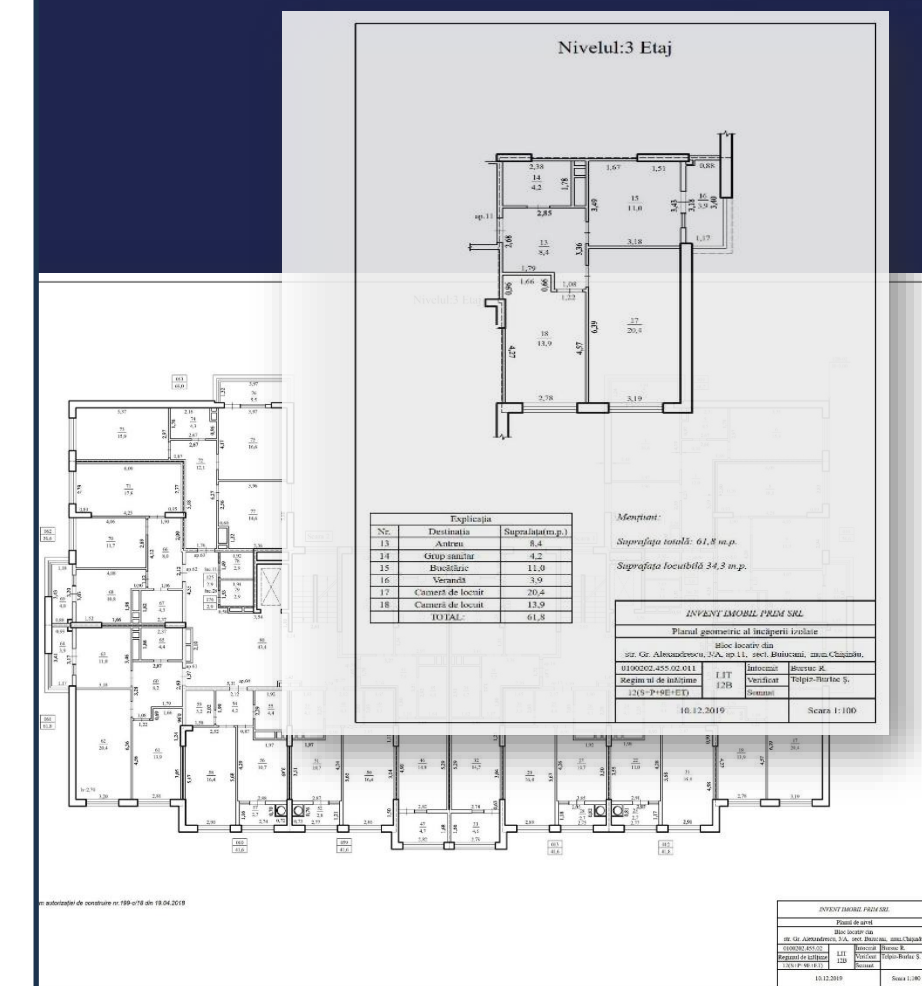
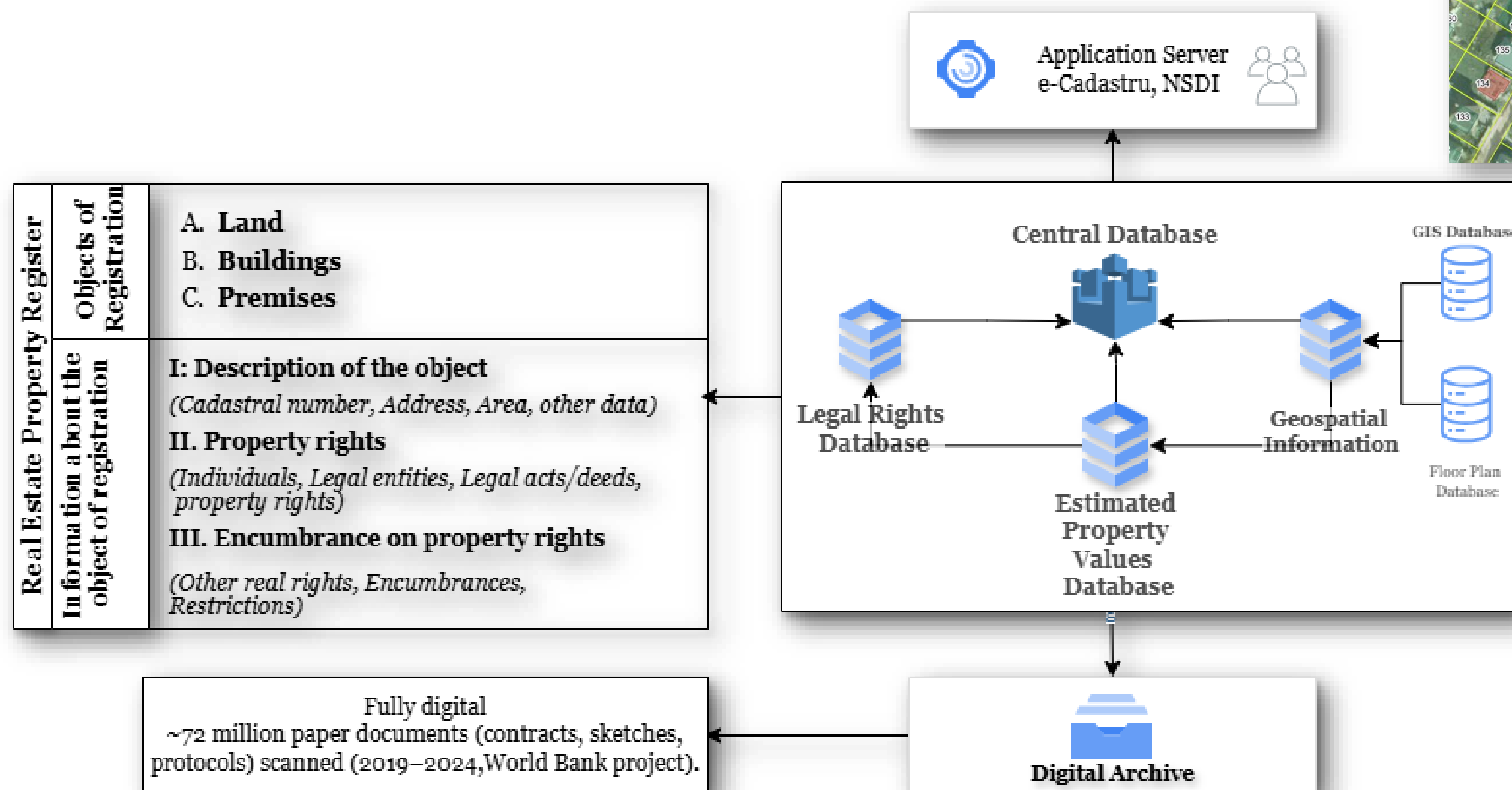
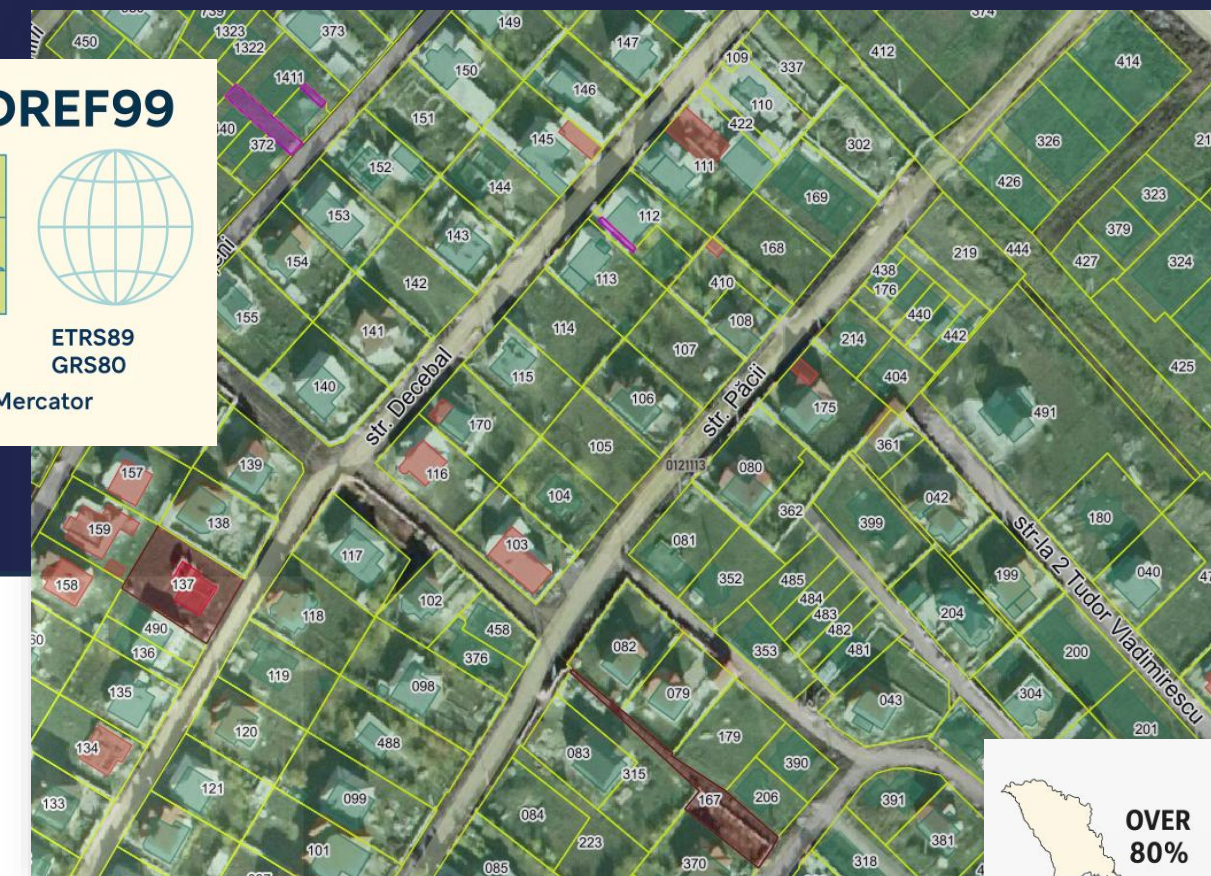
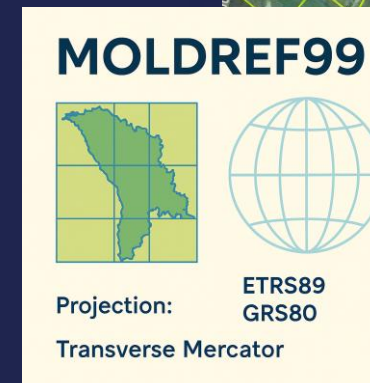
Cooperation mechanisms:

- standardized data exchange,
- clear responsibilities, and
- periodic monitoring.



Data Architecture

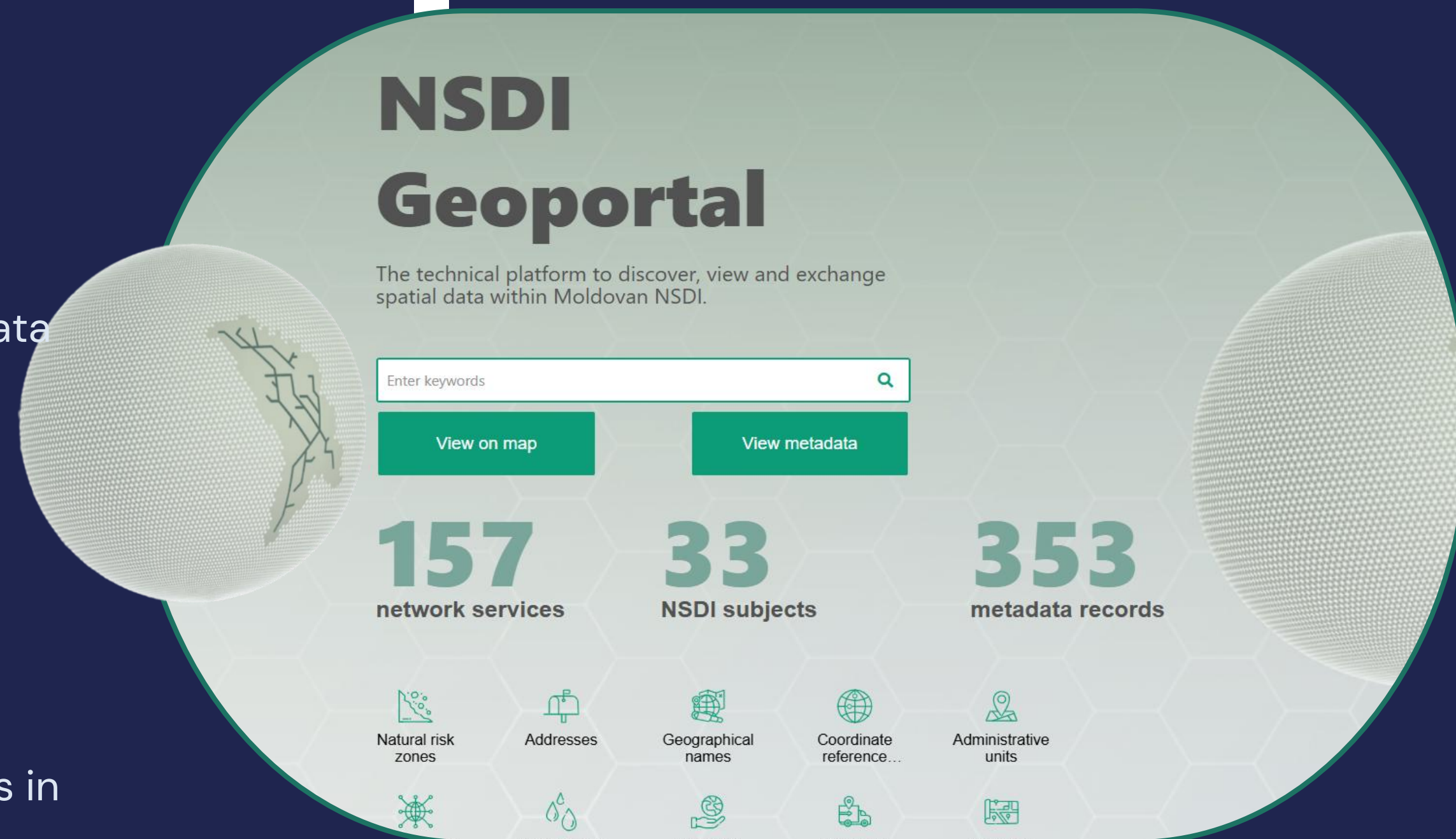
Cadastral Data:



Data Architecture

National NSDI GEOPORTAL:

- ✓ **Single access point** to metadata for spatial data from multiple sources;
- ✓ **Metadata-driven** discovery of datasets standard Catalog Services for the Web;
- ✓ **Visualization and download** of spatial data;
- ✓ **Cross-agency integration:** combine and view datasets held by different public authorities in one interface.

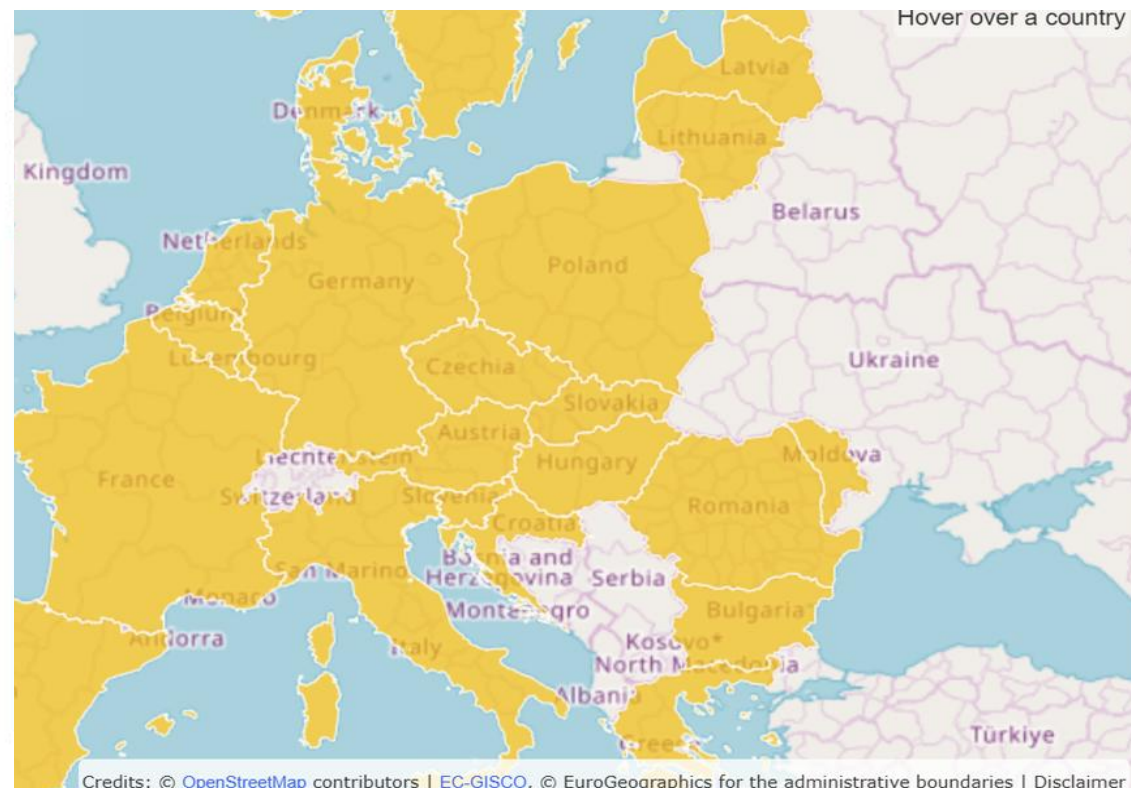


International cooperation

NSDI and INSPIRE Geoportal

Harvested Since October 2024 through CSW standards

INSPIRE Datasets - EU & EFTA Country overview



Geoportal Dataset Statistics

131970
Metadata records

101280
Downloadable Datasets

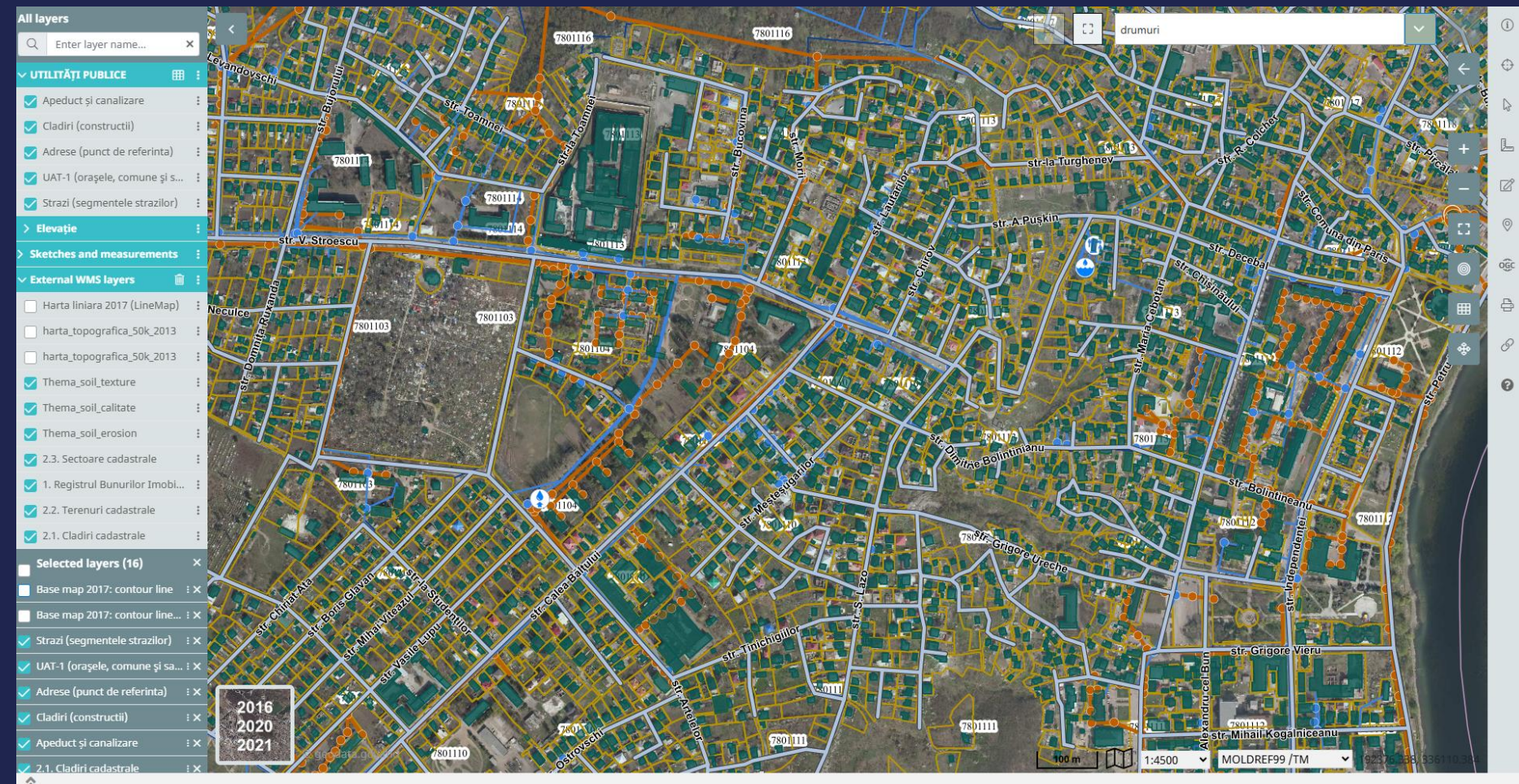
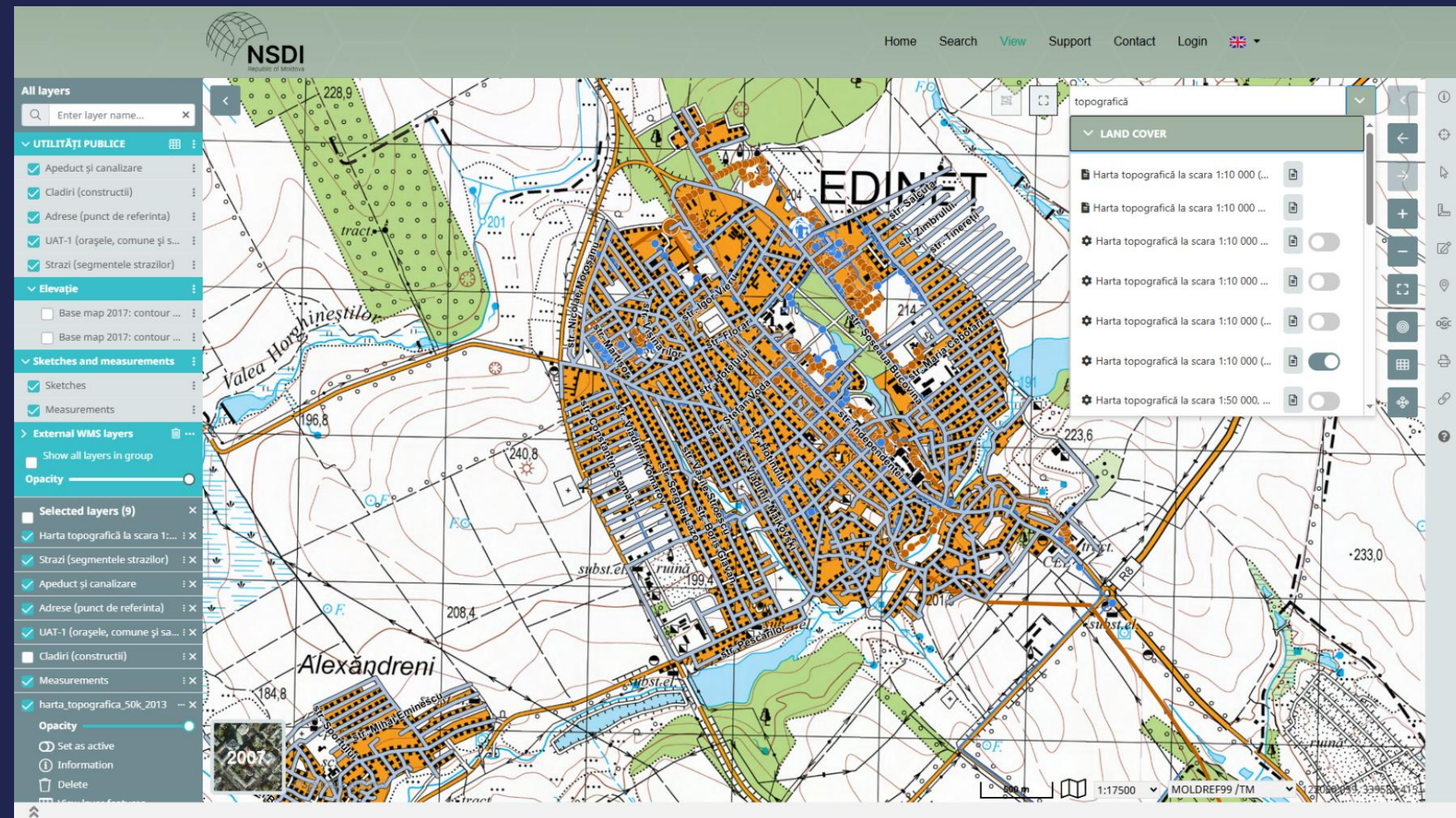
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Viewable Datasets

Spatial scope coverage:

- ☐ National
- ☐ Regional

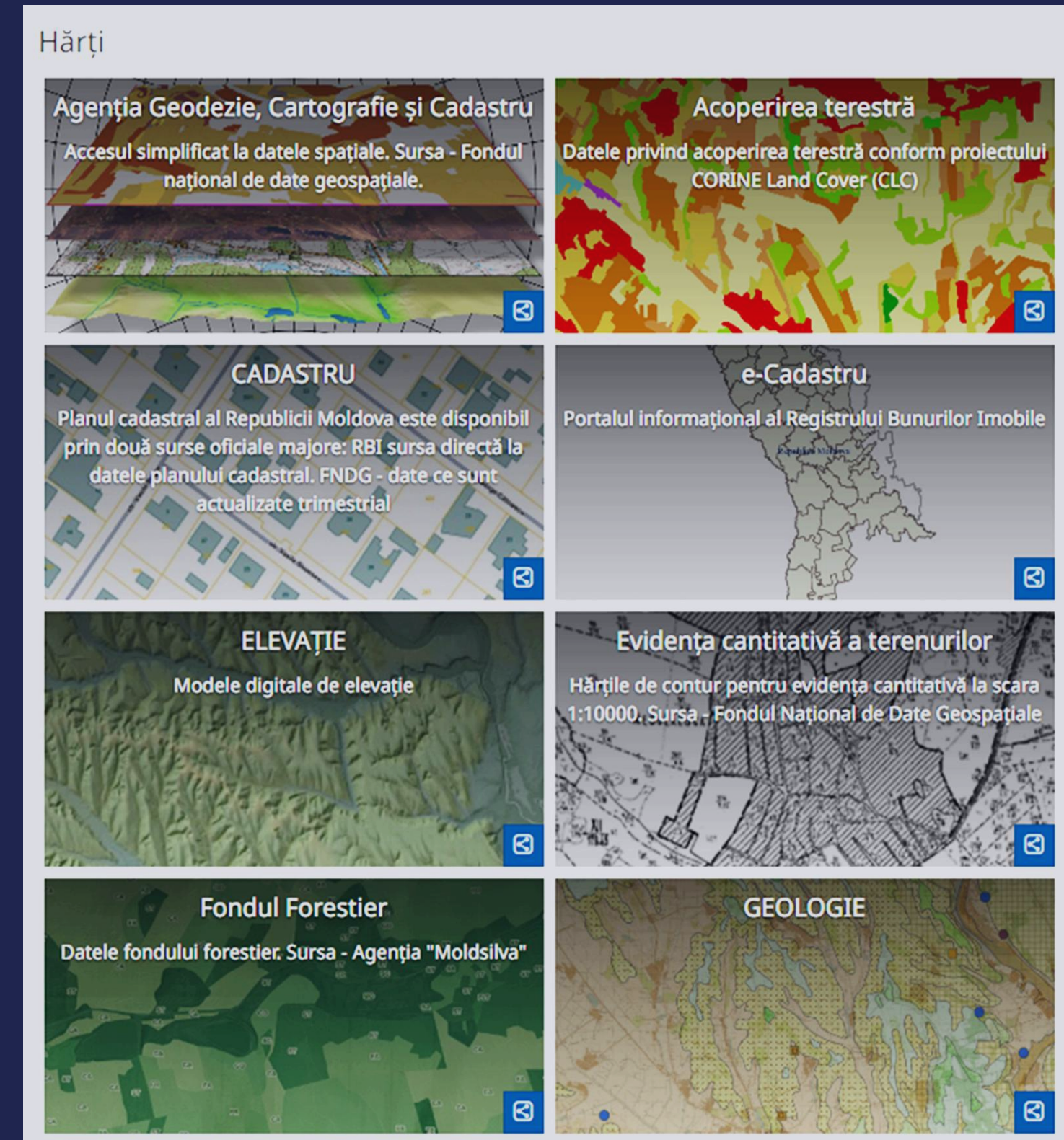
Select a country

Austria	1172 1155 537	Greece	45 45 44	Netherlands	227 196 201
Belgium	613 557 566	Hungary	78 57 55	Norway	142 49 22
Bulgaria	167 115 129	Iceland	106 62 85	Poland	172 129 123
Croatia	145 96 127	Ireland	84 72 81	Portugal	345 223 222
Cyprus	42 42 41	Italy	8519 2899 4543	Romania	124 53 50
Czech Republic	94 88 89	Latvia	158 87 94	Slovakia	147 138 142
Denmark	197 144 134	Liechtenstein	86 38 56	Slovenia	81 40 42
Estonia	92 73 74	Lithuania	103 102 86	Spain	390 382 385
Finland	448 210 252	Luxembourg	316 314 293	Sweden	250 225 231
France	207 119 141	Malta	152 151 150	EUROSTAT	30 30 30
Germany	116886 93400 94324	Moldova	189 4 95		



GEODATA – the thematic geoportal ensuring interoperable access to spatial data in the Republic of Moldova

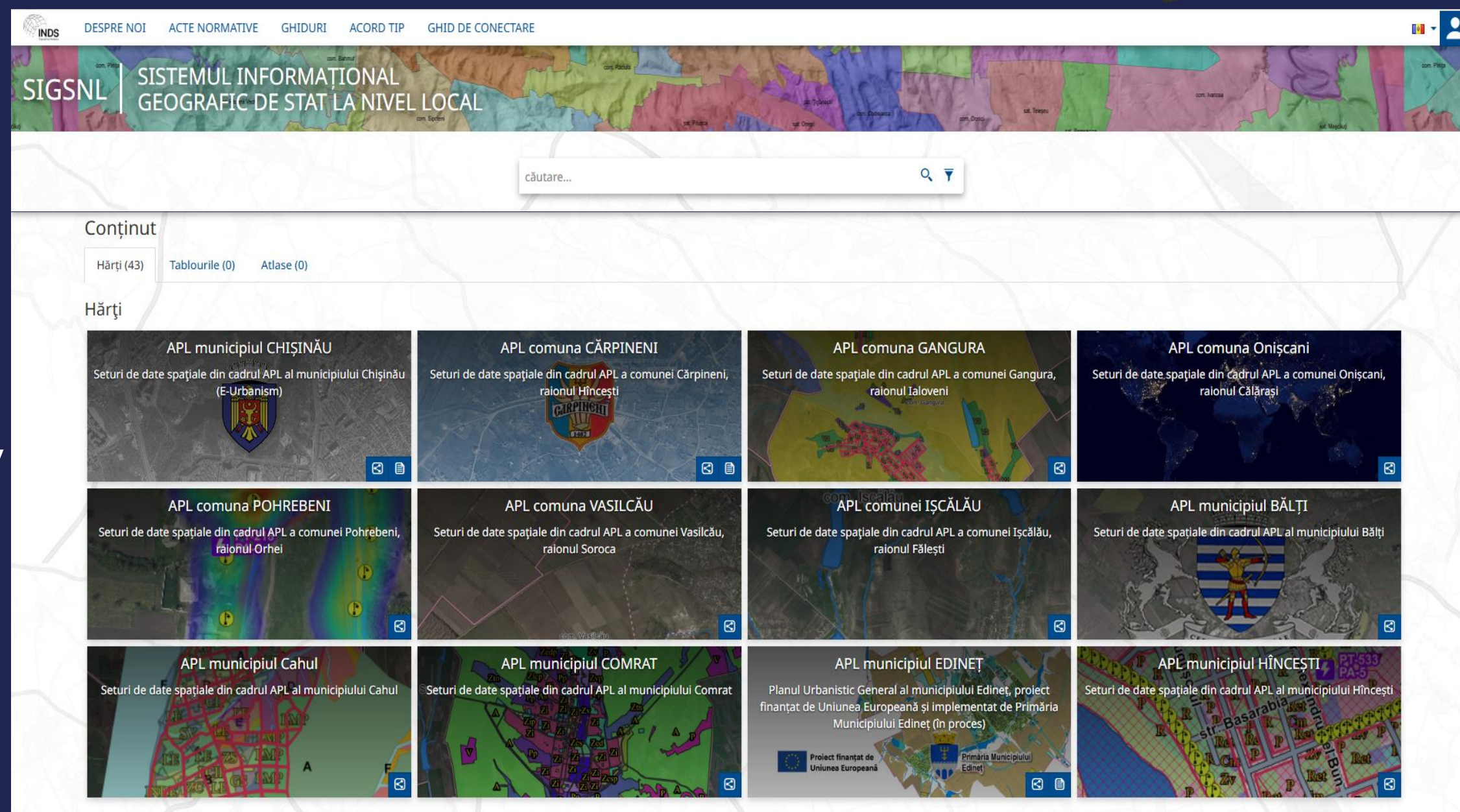
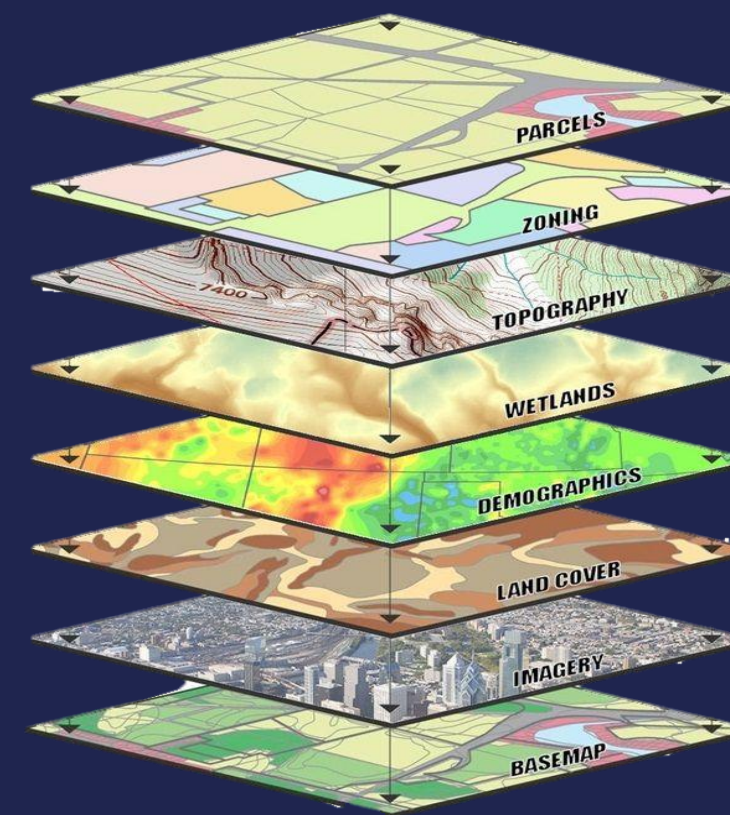
- ✓ Geodata provides access to spatial data sets through network services, under the responsibility of the Agency for Geodesy, Cartography and Cadastre.
- ✓ It promotes the sharing and interoperability of spatial data, facilitating collaboration between various public and private entities.
- ✓ The system is designed to be compatible with other geographic information systems and can be easily integrated into existing infrastructures, thus ensuring the efficient and seamless use of our resources.



State Geographic Information System at Local Level (SIGSNL)

Operational Support for Data Processing and Design

- ✓ Informed decision-making through GIS visualization and analysis.
- ✓ Optimization of infrastructure and costs (roads, utilities).
- ✓ Efficient management of emergencies and disasters.
- ✓ Sustainable urban and territorial planning.
- ✓ Improved public services (street advertising, waste, public transport, utilities).
- ✓ Transparency and civic participation via access to maps and spatial data.
- ✓ Support for policymaking, investment, and the business environment.



Future Plans

Cadastral Data Transformation in Support of Climate Resilience

- ✓ Build the new SICBI as an interoperable, risk-aware system with automated risk alerts.
- ✓ Extend the data model with resilience attributes for buildings and parcels.
- ✓ Introduce standardized annotations on restrictions and technical regimes in risk areas.
- ✓ Provide an informative “Risk Summary” in cadastral extracts and on the public geoportal to enhance transparency and public awareness.



Thank You

 <https://www.agcc.gov.md>

 <https://www.geoportalinds.gov.md>

 <https://www.sigsnl.gov.md>

 <https://www.geodata.gov.md>

