

The Danube Reference Data and Services Infrastructure

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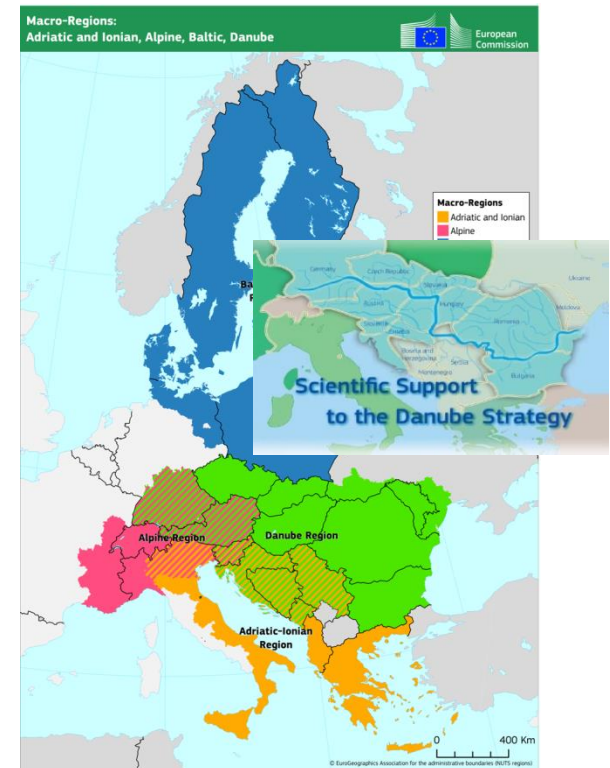
ec.europa.eu/jrc

About JRC support to MRS

The European Commission's science and knowledge service provides support to individual regions and to Macro Regional Strategies (MRS) in order to:

- boost smart, sustainable and inclusive economic growth and job creation
- Contribute to the objectives of Europe 2020 strategy

→ JRC scientific support to the EU Strategy for the Danube Region: Gathering scientific expertise and data to help in support to EUSDR



Scientific support to the EUSDR

- Establish cooperation agreements with Science Academies and the Danube Rectors Conference;
- Develop proposals for flagship clusters and horizontal activities which were approved at a high-level event in Bratislava in 2013;
- There are four thematic clusters:
 - The Danube Water Nexus;
 - The Danube Land and Soil Nexus;
 - The Danube Air Nexus;
 - The Danube Bio-energy Nexus;
- And three horizontal activities:
 - Danube Innovation Partnership
 - Smart Specialisation for the Danube
 - The Danube Reference Data and Service Initiative (DRDSI)



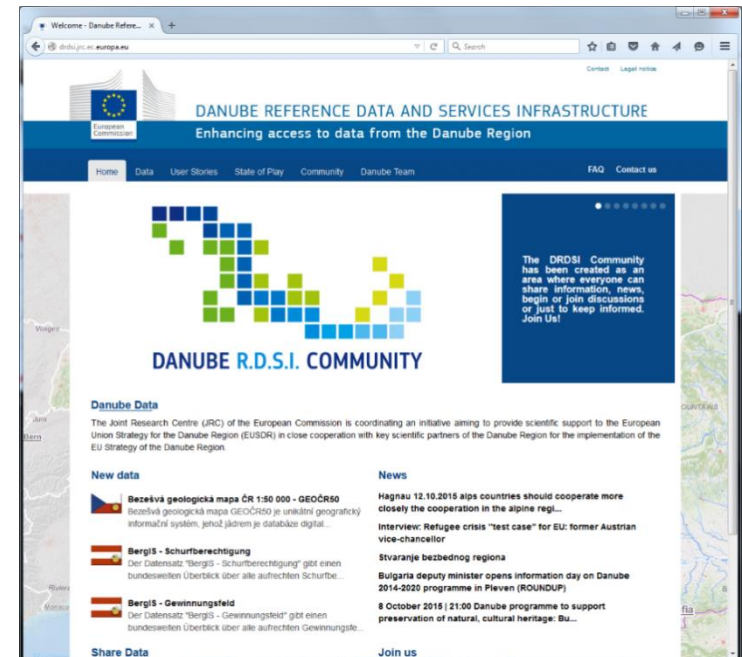
DRDSI in a nutshell

Video Link: <http://drdsi.jrc.ec.europa.eu/multimedia/drdsi.mp4>

"... set up or consolidate a sound monitoring system, with the support of the Commission and the ESPON programme, to report on progress and support their strategic orientation; the Danube Reference Data and Services Infrastructure can support the establishment of a sound monitoring system;"

Source: Report on the Implementation of EU Macro-Regional Strategies (COM(2016)805)

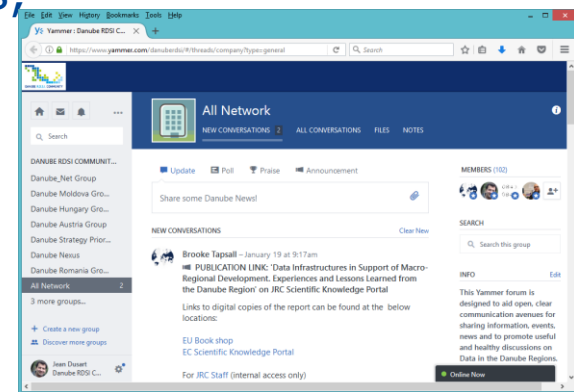
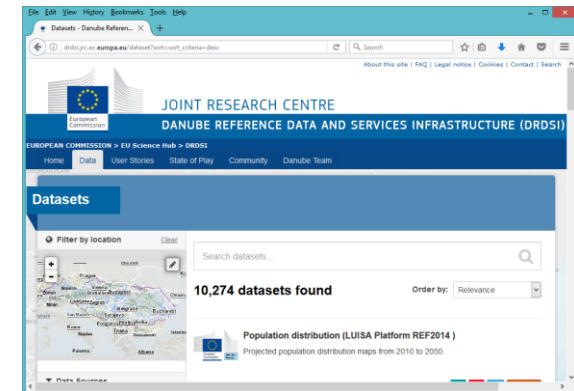
- **Search Engine and Metadata repository** for details about data, projects, applications... for the whole Danube Region from government authorities of the EUSDR MS (public data) and linked to the priorities of EUSDR
- **Openness and transparency** fostered through data sharing
- Testbed for **INSPIRE Directive implementation** (including pilots and apps)
- **Leverages** investments for data collection, harmonisation and access and generate value added services (for private actors and e-government services)
- **Network of experts** (DANUBE_NET) from each Danube country for local promotion, content generation and stakeholder engagement



DRDSI Content

<http://drdsi.jrc.ec.europa.eu>

- More than **10000** resources
- Metadata about data issued by Research Projects, EC Institutions (EEA, Copernicus), surveyed by a network of representatives in each of the 14 countries of the EUSDR, or harvested from national Open Data platforms, INSPIRE portals, international organisations (ICPDR)
- User Stories combining resources from the platform around a story line
- State of Play of data infrastructures in all countries
- A Collaboration Space to share about data in the Danube



Why data are crucial for supporting macro regional strategies?

Lessons learned from the Danube Reference Data and Services Infrastructure

- **Need for a common entry point.** Data coming from INSPIRE, and other sources, should be quickly gathered as baseline information (ex-Ante/ex-Post/monitoring of strategy implementation) → Knowledge Centres/Territorial Observatories
- **Contributes to openness and transparency through data sharing.** This should include evaluating (open) data policies and the adoption and reuse of INSPIRE that can support a range of Strategies' objectives.
- Sharing data is not only a **legal obligation or a means to support policy implementation/evaluation...** but also a valuable resource for regions. Sharing it in standardised ways can lead to **value-added products**, including citizen participation in policy and value-added tourism applications

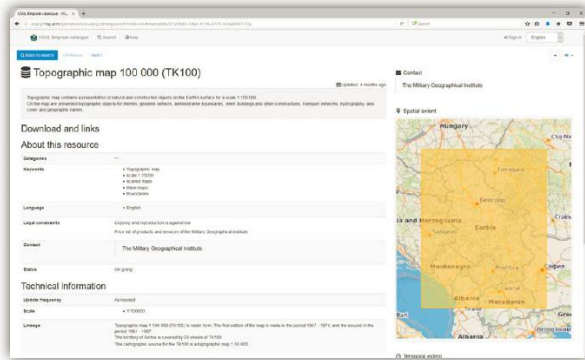
Where should efforts be concentrated?

- Promote Open Data policies and knowledge sharing in both Member States (Free Flow of Data Initiative under the Digital Single Market, EU eGovernment Action Plan 2016-2020) and non Member States
 - *"...There is a growing demand from business and citizens to have access to high quality, interoperable and re-usable data to provide new services, in particular the area of spatial data. The use of spatial data for urban, land-use, traffic planning and for scientific purposes can unleash new innovations that respond to societal needs such as reducing the negative impact on the environment."* (eGovernment AP)
- Offer increased visibility by engaging stakeholders, raising awareness about data policies
- Ensure the long-term sustainability and identify the best governance model serving the needs of the Danube Region and the EC (e.g. by bringing lessons from DRDSI into the Knowledge Centre on Territorial Policies)
- Pursue education and training (human Capital Dimension) by engaging with regional actors (Danube Rectors' Conference, Danube Strategy Research Network)
- Balance efforts between EU and non-EU countries, by supporting pilots, capacity building, etc.

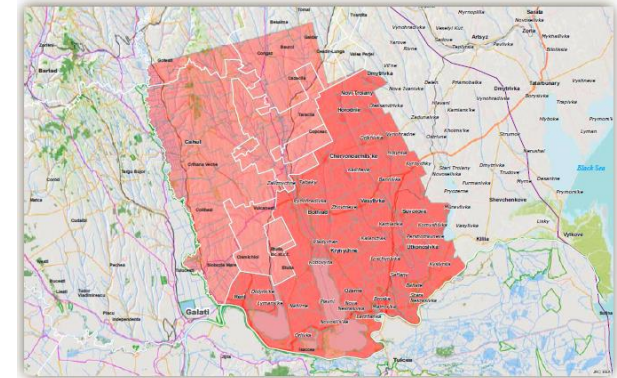
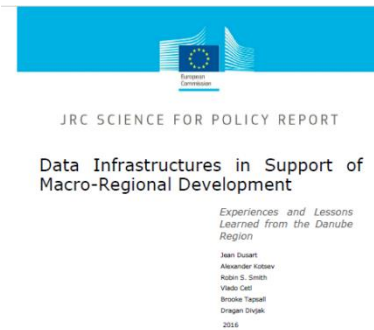
Strategic recommendations

- Data are crucial for macro regional strategies
 - Evaluation, but also monitoring, anticipation, implementation and impact assessment
 - At all levels (European, macro, regional and local)
 - For all stakeholders
 - Should be part of guidelines/best practises (H2020 Open Access to Research Data¹)
- Best use of investments (aligning funds) and targeting resources require facts and robust data. The more mature MRS become... the more they will become subject to 'classical' evaluation schemes
- Countries face similar challenges- experience should be shared further
- ... and common solutions developed to address them to continue collaboration
- Seed investments create sustainable and transferable results
- Data should be:
 - Considered as a reusable asset
 - Made available at the right level of governance
 - Easily found and accessed to maximize its potential

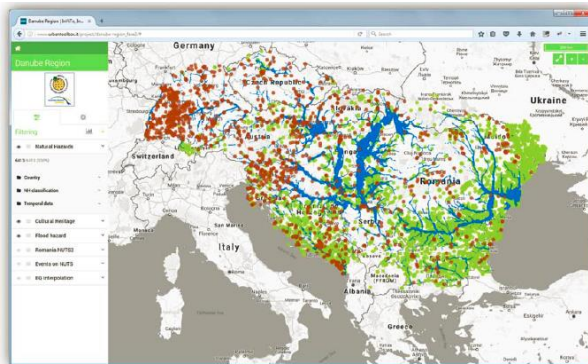
Pilot examples of impact



Infrastructure components (Serbian Metadata catalogue local node)



Cross-border Data Harmonisation (Moldova - Ukraine)



Value-added applications (Cultural heritage & environmental hazards)

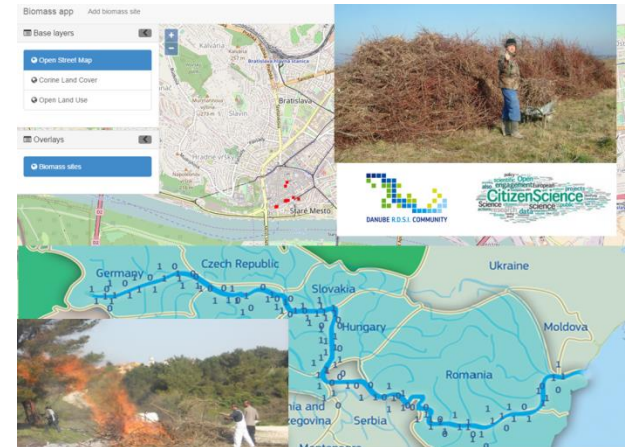
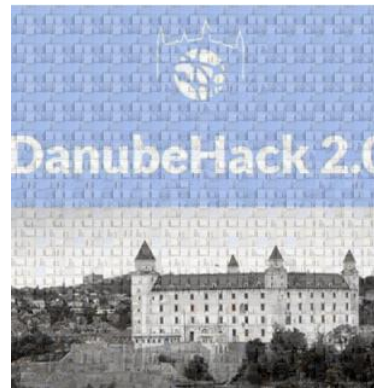


Citizen science (Invasive Alien Species App)

DanubeHack.eu



Explore Your Urban Environment
#HugATreeOnYourWayHome

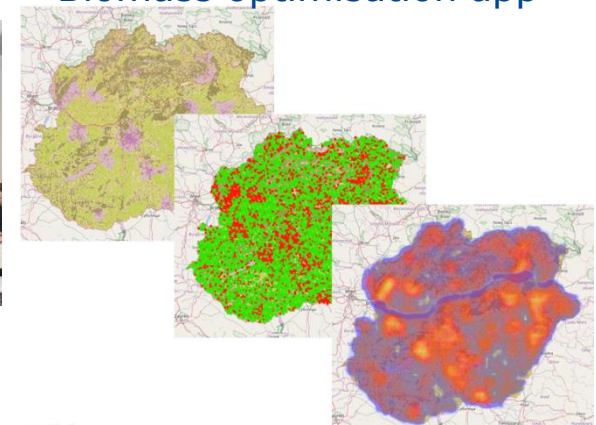


Waste2Fuel
Biomass optimisation app



Copernicus WebApp

Copernicus data visualisation & calculation



SDI4Apps Open Land Use Quality Viewer
(Quality of land use HILUCS categories)