Scientific Support to the EU Strategy for the Danube Region and the Danube Water Nexus project

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The rationale for the JRC action in the Danube Region

• Contribute to the reinforcement of ties and cooperation amongst the scientific community of the Danube Region

• Help decision-makers and other stakeholders to identify the policy needs and actions needed for the implementation of the EU Strategy for the Danube Region (EUSDR)

• Tackle challenges and priorities of the region in an integrated manner by anchoring the EUSDR in the EU 2020 Strategy
Addressing key scientific needs in the implementation of the EUSDR

- JRC-IES Soil Resource Assessment project: Danube Soil Database and Summer School
- JRC-IET: Regional database on energy
- JRC-HQ: Danube Innovation Nexus

Air and Health
JRC-IHCP

MARS
Agriculture
JRC-IES

Air
Nexus
JRC-IES

Water
Nexus
JRC-IES

Bioenergy
Nexus
JRC-IET

SMART SPECIALISATION PLATFORM
Danube Reference Data Spatial Infrastructure: A single access point to Danube Region data

- DRDSI Design and Development (2014)
- Inventory of the JRC data as starting point followed by an inventory of external sources and collaboration (2014)
- Pilot and prototype platform on Monitoring Biodiversity of Danube Delta (2015-2016)
- Use of novel technologies

http://drdsi.jrc.ec.europa.eu (release 1)
Danube Water Nexus: Support decision making about sustainable futures of water resources

- **Scenarios of environmental and economic impacts** of alternative water allocation measures across competing water-using sectors, including an assessment of the provision/valuation of ecosystem services

- Methodology for modelling of water resources in the Danube river basin, integrating quantity, quality, ecology and hydro-morphology, **in coordination with other tools at national and river basin level** and extension to non-EU countries of the Danube Region

- Supporting efforts of countries and international cooperation bodies in the **implementation of the Water Framework Directive** and planning of medium and long-term actions for the 2nd and 3rd cycles of River Basin Management Plans
A collaborative assessment

- **Build on existing experience** deriving from national projects and international initiatives (e.g. ICPDR, ISRBC, KLIWAS, GLOWA-Danube, Danube Flagship Project DREAM)

- Establish a **Transboundary Modelling Partnership** aiming at the development of a multi-model ensemble for the Danube Region with a common database

- Facilitate **joint building of assessment capacity** and contribute to harmonization across countries
The role of sub-projects

• **Water Quality Modelling**
  A follow up to the Resolution 3/3 at the 16\textsuperscript{th} Ordinary Meeting of the ICPDR, December 2013:
  \textit{g) asks the Secretariat to continue in dialogue with the JRC on basin wide modelling and pollution load assessment}

• **Irrigation Tisza**
  Formulate new model, include economics, optimisation to assess which would be the best strategies to cope with decreasing amounts of surface water in the lower Tisza area

• **Sava river basin**
  Join efforts with ISRBC and UNECE in the Sava Water Nexus assessment
The timetable

• Water quality monitoring in the ICPDR Joint Danube Survey 3 (2013-2014)
• Models and scenarios inventory (2014)
• Transboundary hydro-economic multi-model ensemble for the Danube with a common database (2014-2015)
• Benchmarking models for the Danube (2015)
• Scenarios of environmental and macro-economic impacts of alternative water allocation measures across competing water-using sectors (2015)
• Dissemination and training (2015)
• Feeding the WFD policy process (2016)
Some networking activities
A non-exhaustive list

- GEO BalkanGeoNet Workshop (Novi Sad 09/2013)
- Macro-Regional Water Conference (Budapest 09/2013)
- 2nd Annual Forum of the EU Strategy for the Danube Region (Bucharest 10/2013)
- Meeting ICPDR on data exchange (Vienna 11/2013)
- 3rd meeting of modelling experts (Ispra 01/2014)
- High-level event co-organised with the Austrian government in Vienna on 26th June 2014 (date tbc)
Going beyond Europe

• The Danube as element of a broader **macro-regional perspective** for the assessment of the Water-Agriculture-Energy-Ecosystem Services Nexus

• Focus on Europe and Africa: **Danube-Niger** river basins and the **Mediterranean region**

• Deliver **integrated impact assessments** of water resources in the face of increasing trends of global population, urbanisation, pollution, over-exploitation, climate change
Thank you for your attention