



International Centre  
for Advanced Studies  
on River-Sea Systems

# Making River-Sea Systems Work

A new pan-European distributed Research Infrastructure for the study of River-Sea Systems and the opportunity and risks they present to society

Addressing the conflicts between sustainable development, environmental change and environmental conservation in River-Sea Systems globally

A platform for interdisciplinary research, inspiration, innovation, education and training

[www.danubius-ri.eu](http://www.danubius-ri.eu)

# DANUBIUS-RI

River-Sea Systems (RSS), covering whole river basins and the coastal waters that they influence, are of major importance for food and energy production, transport, and societal wellbeing. They are facing pressures from natural and anthropogenic perturbations at local, regional and global scales. European research on RSS, including the transitional zones between freshwater and marine environments, is fragmented, largely single-disciplinary and geographically separate.

DANUBIUS-RI is a pan-European distributed research infrastructure under development, building on existing expertise to support interdisciplinary research on RSS spanning the environmental, social and economic sciences. It will provide access to a range of RSS, facilities and expertise - a 'one-stop shop' for knowledge exchange, access to harmonised data, and a platform for interdisciplinary research, education and training.

Questions that guide the Science Plan of DANUBIUS-RI:

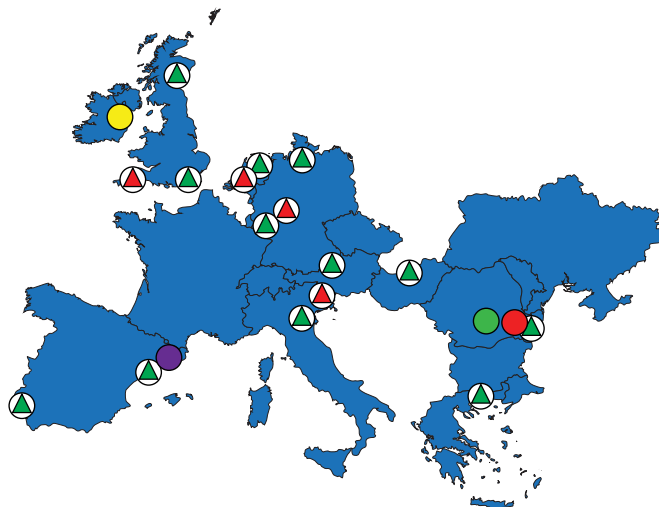
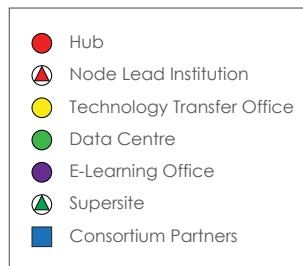
- how are RSS changing due to natural and anthropogenic pressures?
- what are the drivers behind these changes?
- how are these changes affecting RSS functioning and services?
- how can we distinguish between natural variability and human induced changes?
- how can we make our use of RSS sustainable?

DANUBIUS-RI will consist of a Hub (including Headquarters), Data Centre, Technology Transfer Office, e-Learning Office, Nodes and Supersites across Europe.

The four Nodes (Observation, Analysis, Modelling, and Impact) will provide expertise and services, data-storage and provision, experimental and in-situ facilities. The Supersites - defined areas of water/land for research and observation activities open to all researchers - are the components of the DANUBIUS-RI where ideas and developed concepts will be tested, refined and verified. Supersites are: Elbe-North Sea (DE), Thames Estuary (UK), Nestos (EL), Po Delta and North Adriatic Lagoons (IT), Ebro-Llobregat Deltaic System (ES), Upper Danube (AU), Middle Danube – Szigetköz (HU), Danube Delta (RO), Middle Rhine (DE), Rhine-Meuse Delta (NL), Guadalquivir Estuary (ES) and Tay Catchment (UK).

At the heart of DANUBIUS-RI will be the DANUBIUS Commons: a set of harmonised methods, protocols, instruments, data acquisition and management to ensure the quality and consistency of scientific output.

DANUBIUS-RI is included in the ESFRI Roadmap and proposes to apply for ERIC (European Research Infrastructure Consortium) status as the basis for governance. DANUBIUS-RI expects to be fully operational from 2023.



## Preparatory Phase



Preparatory Phase for the pan-European  
Research Infrastructure DANUBIUS-RI  
"The International Centre for Advanced  
Studies on River-Sea Systems"

DANUBIUS-PP ([www.danubius-pp.eu](http://www.danubius-pp.eu)) is a three-year project funded by the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 739562 aiming to raise DANUBIUS-RI to the legal, financial and technical maturity required for successful implementation and development.

DANUBIUS-PP brings together key stakeholders through a process of wide engagement. The Consortium is led by the Romanian Institute for Marine Geology and Geoecology (GeoEcoMar) and is currently composed of 30 partners from 16 countries, with expressions of interest and support from the scientific community in many other countries in Europe and worldwide. The Consortium provides a well-balanced mix of competencies required to build DANUBIUS-RI, in terms of both scientific and administrative domains, as well as geographical coverage.

DANUBIUS-PP is developing the structures and processes to ensure that the RI strengthens scientific performance by providing a sustainable basis for future operation, delivering key services to the different user communities.

For further information, please visit our websites at [www.danubius-ri.eu](http://www.danubius-ri.eu) and [www.danubius-pp.eu](http://www.danubius-pp.eu) (Preparatory Phase) or email us at [danubius.research@geoecomar.ro](mailto:danubius.research@geoecomar.ro)

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