

The ESFRI DANUBIUS Research Infrastructure



International Centre
for Advanced Studies
on River-Sea Systems

Georg Umgiesser CNR-ISMAR



Dipartimento Scienze
del Sistema Terra
e Tecnologie per l'Ambiente

18-19 March 2021



Our Vision

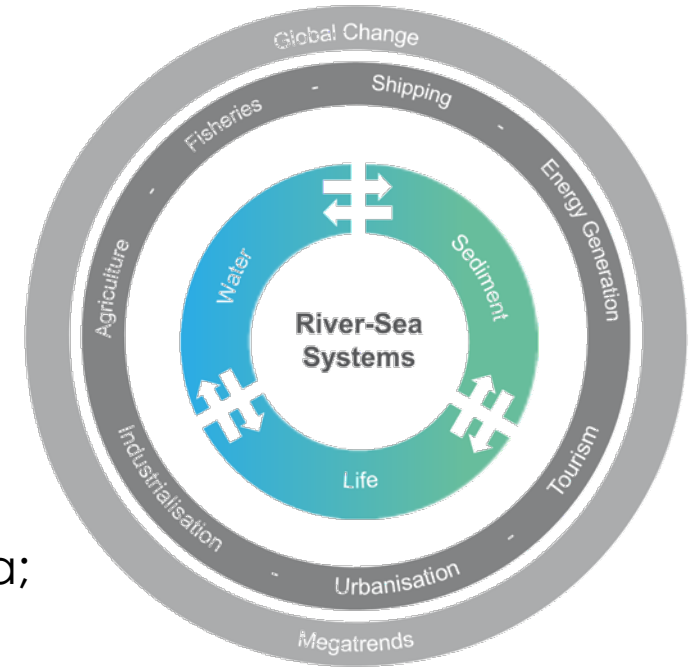
to achieve **healthy River-Sea Systems** and to advance their **sustainable use**, in order to live within the planet's ecological limits by 2050.

Our Mission

- to provide **state-of-the art research infrastructure** from river source to sea;
- to facilitate **excellent interdisciplinary science**;
- to offer **integrated knowledge** to manage and protect River-Sea Systems.

Our Goals

- **to overcome the current fragmentation of science, knowledge, data & management** in rivers and seas by integrating spatial, temporal, disciplinary and sectorial thinking;
- **to provide scientific solutions to environmental and societal risks** from climate change;
- **to resolve problems** arising from human impacts on River-Sea Systems by using an **interdisciplinary perspective**, from source to sea.



SCIENCE and INNOVATION identified by EU Green Deal as the driver of transformation the environmental, social and economic transformations required to tackle the climate challenge

Water is an essential asset in at least **4 of the 5 Horizon Europe Missions**

DANUBIUS-RI is identified by ESFRI as “**the only research infrastructure** devoted to support research on transitional zones **between coastal marine and freshwater areas**”.

DANUBIUS-RI Areas of research (SRIA)

Global Change and Megatrends

- Climate Change and Extreme Events

Water and Sediment

- Quantity and Hydromorphology: From Source to Sea
- Quality: Nutrients and Pollutants

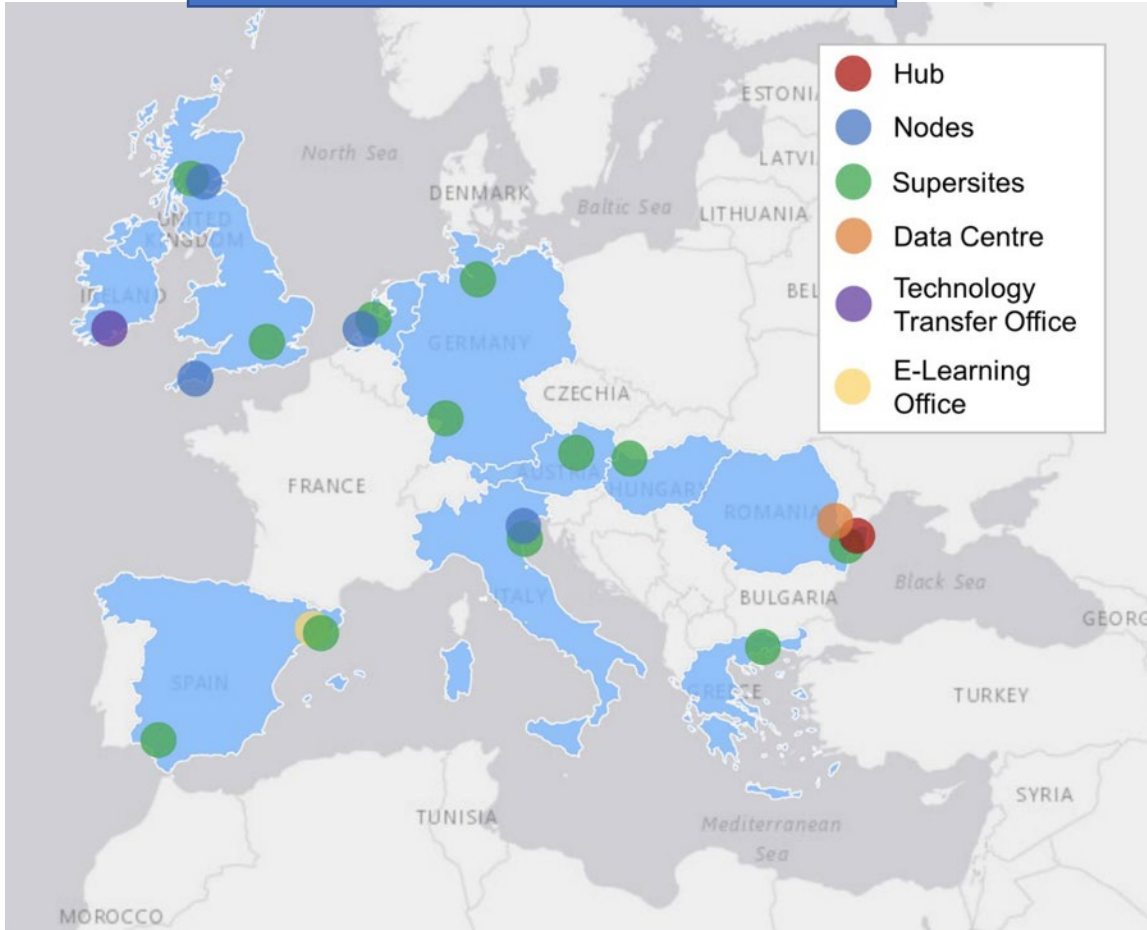
Biodiversity and Ecosystems

- Ecosystem Functioning
- Ecosystem Services

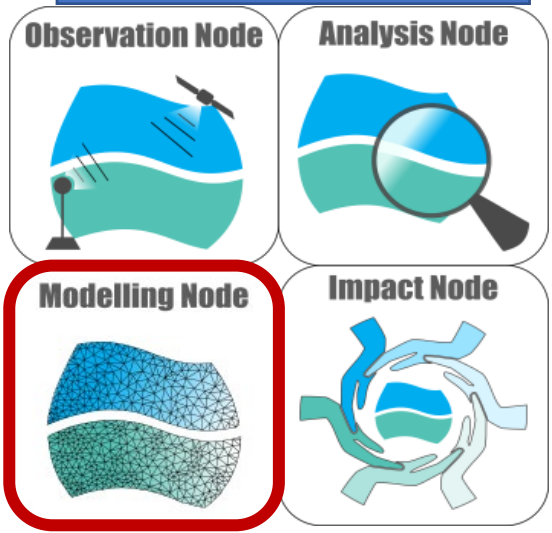
Multiple Impacts on River- Sea Systems

taking into account the need to respond to complexity

All Components



4 Thematic Nodes



Italian partners

CNR
OGS
CORILA

JRU to be established and enlarged

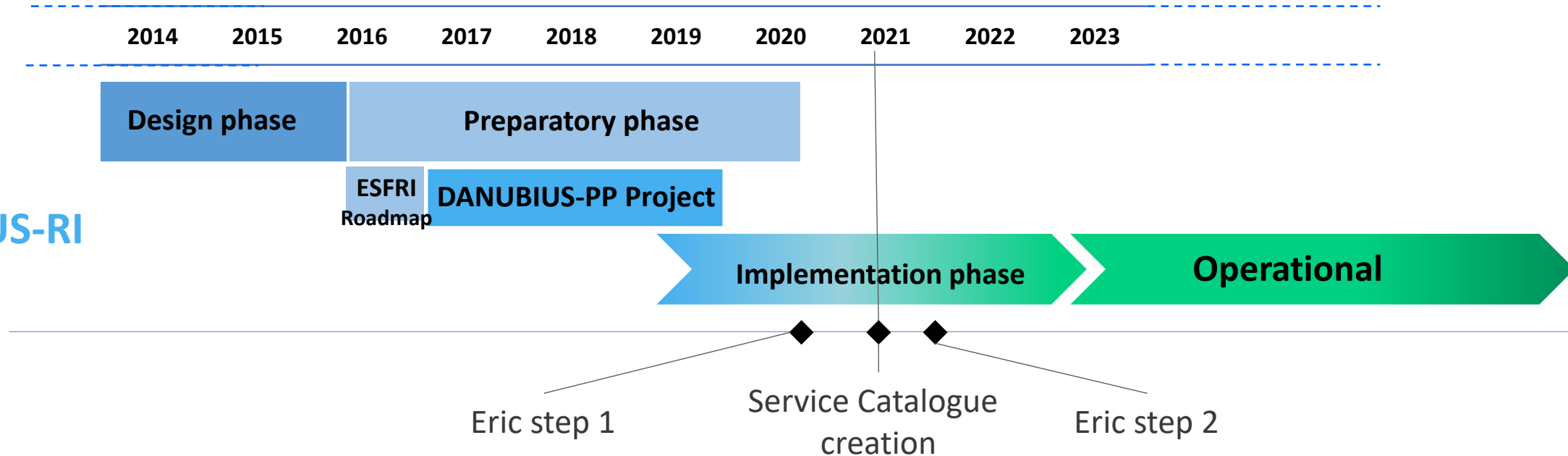
12 Supersites





DANUBIUS-RI Timeline

EUROPEAN TIMELINE of DANUBIUS-RI



Actions at Italian national level

1. **Creation of JRU and scientific community** (All CNR interested institutes, Universities etc...)
2. **Stakeholders community** (Ministries, EPAs, Regions, etc...)
3. **Start the process to add DANUBIUS-RI in the new PNIR**



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www.danubius-ri.eu

www.danubius-pp.eu

Georg Umgiesser
Debora Bellafiore
Francesca De Pascalis

danubius@ismar.cnr.it



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