



International Centre for Advanced Studies on River-Sea Systems



DANUBIUS-RI - International Centre for Advanced Studies on River-Sea Systems to support world-leading interdisciplinary research and innovation

- DANUBIUS-RI will be a pan-European distributed research infrastructure dedicated to interdisciplinary studies of large river-sea systems. It will enable and support research addressing the conflicts between society's demands, environmental change and environmental protection in river-sea systems worldwide.
- DANUBIUS-RI is being developed by partners in eleven European countries, with expressions of interest and support from the scientific community in many others in Europe and worldwide. It aims to become operational by 2022.
- TYPE: distributed Research Infrastructure
- Coordinating country: RO
- Participant Countries: BG, DE, ES, GR, HU, IE, IT, MD, NL, RO, UK
- Full opening towards International Cooperation – global relevance
- TIME LINE • ESFRI Roadmap entry: 2016 • Preparation Phase: 2016-2019 • Construction phase: 2012-2022 • Operation phase: 2022

Specific research questions:

How does global climate change affect river-sea systems?

- * Physical dynamics
- * Biogeochemical cycles
- * Nutrient dynamics
- * Geohazards

How do river-sea systems respond to global climate change and increased human pressure?

- * Vulnerability
- * Adaptation
- * Resilience
- * Structure/function changes
- * Alien species

How do changing societal demands affect river-sea systems?

- * Natural resources
- * Social dynamics
- * Impact on goods/services
- * Sustainable development

How to increase the effectiveness of measures for river-sea systems?

- * Restoration of impacted systems
- * Enhancement of resilience
- * Understanding system connectivity

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Addressing societal challenges related to river-sea systems requires new approaches to world leading research, spanning traditional disciplines

The DANUBIUS-RI concept

DANUBIUS-RI aims at addressing scientifically and efficiently the sustainability of rivers, seas and coastal areas: the whole hydrological basin

DANUBIUS-RI supports interdisciplinary research

- step change in understanding through a sustained breakdown of barriers to interdisciplinary research and knowledge transfer
- harmonised instrumentation, protocols and data acquisition (DANUBIUS Commons) to guarantee quality and consistency of scientific output
- open access based on competition and selection of proposals evaluated on scientific excellence and social and economic relevance
- Accepted on the 2016 ESFRI Roadmap
- Looking towards ERIC – to become operational by 2022

DANUBIUS-RI Components

Hub (Romania)

Nodes:

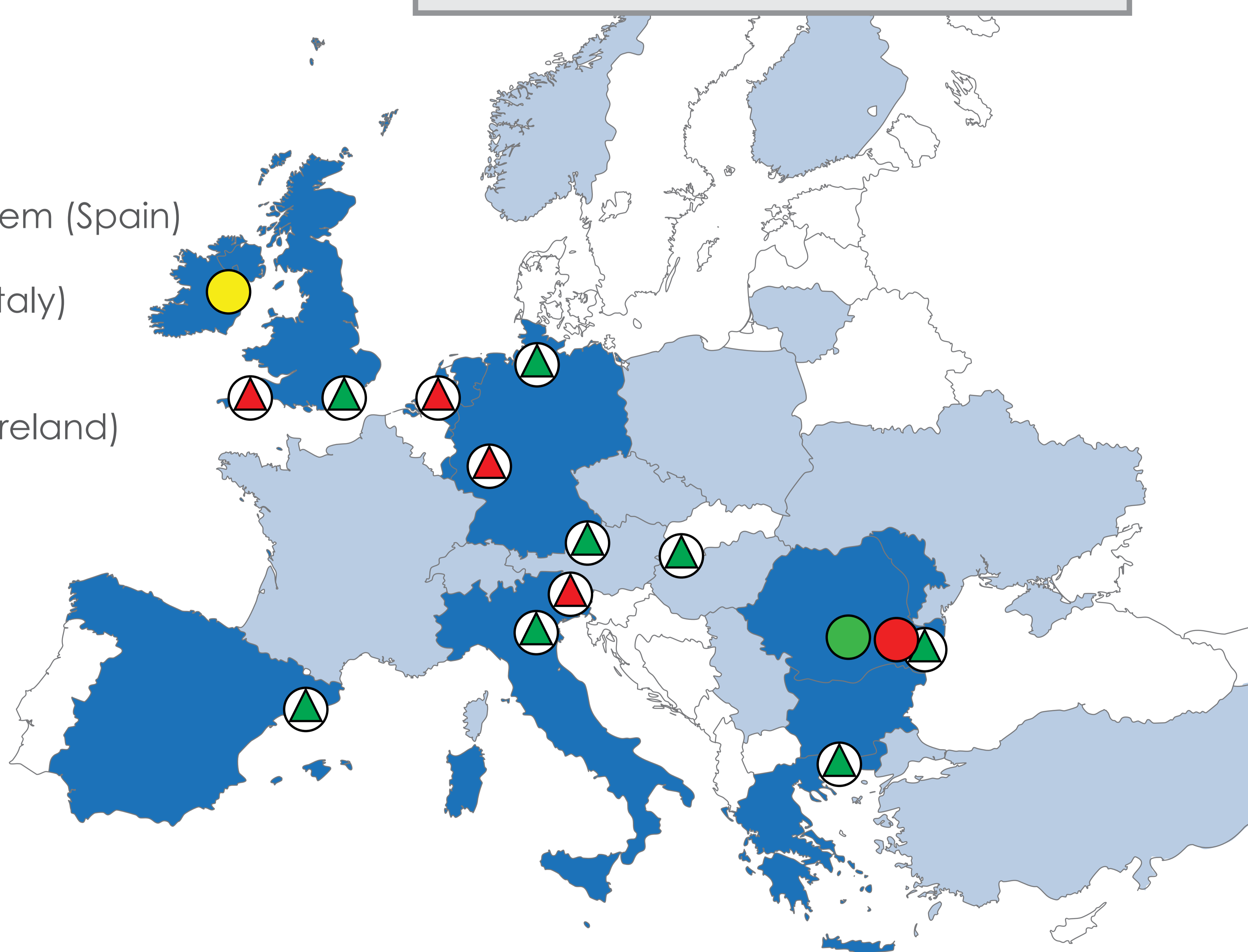
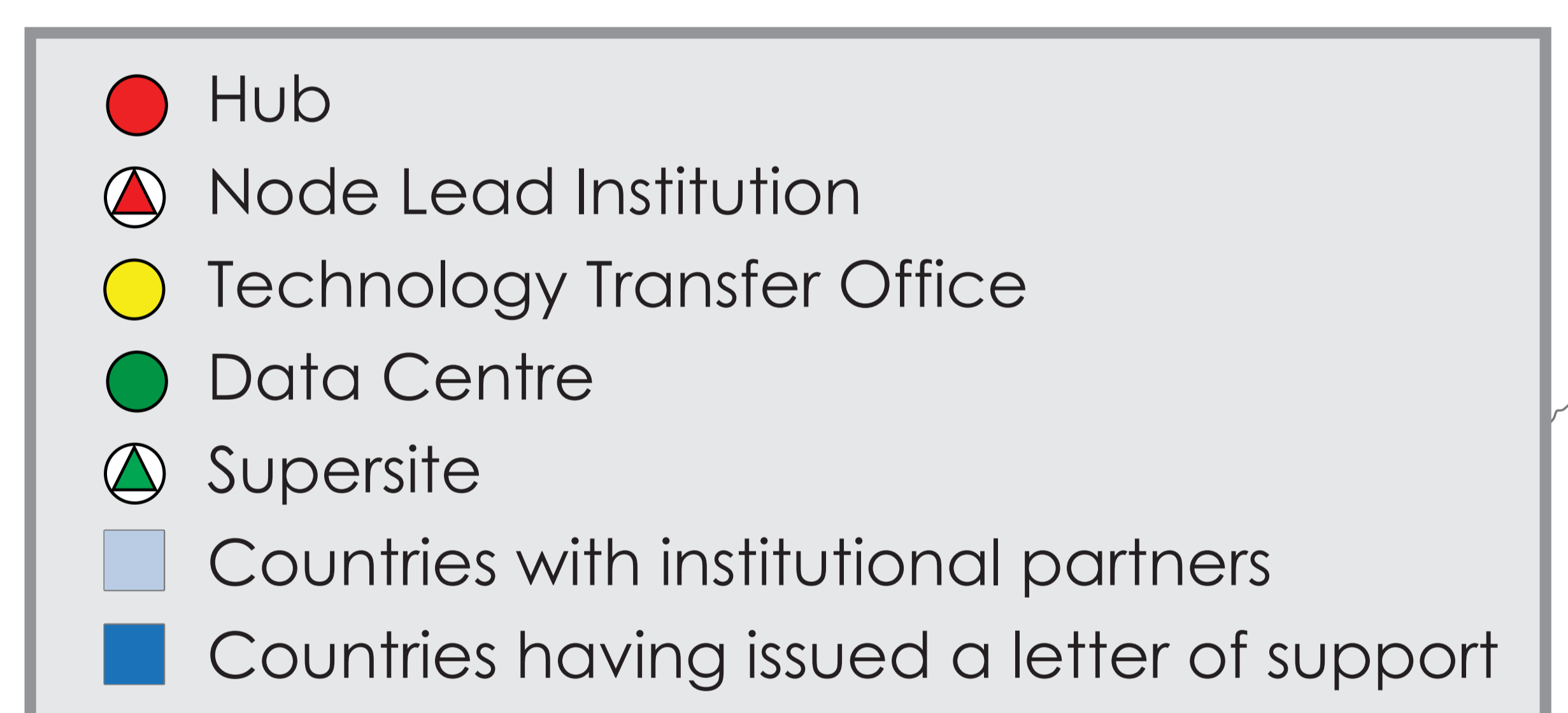
- Observation (UK)
- Analysis (Germany)
- Modelling (Italy)
- Social & Economic (Netherlands)

Supersites:

- Elbe Estuary (Germany)
- Thames Estuary (UK)
- Nestos (Greece)
- Danube Delta (Romania)
- Ebro-Llobregat Deltaic System (Spain)
- Szigetkoz (Hungary)
- Po Delta-Venice Lagoon (Italy)
- Lake Lunz (Austria)

Data Centre (Romania)

Technology Transfer Office (Ireland)



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