

Making River-Sea Systems work

Vignati Davide A.L.^{1*}, Usseglio-Polatera Philippe¹, Stanica Adrian², the DANUBIUS-PP consortium³

1) Université de Lorraine, UMR 7360 CNRS LIEC, Metz, France ; 2) GeoEcoMar, Bucharest, Romania ; 3) www.danubius-pp.eu



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Desirable features

- Natural hydrological regime
- Natural sediment budget
- Naturally changing morphology
- No harmful chemicals
- Functional and biodiverse ecosystems

Healthy River-Sea Systems (RSS)

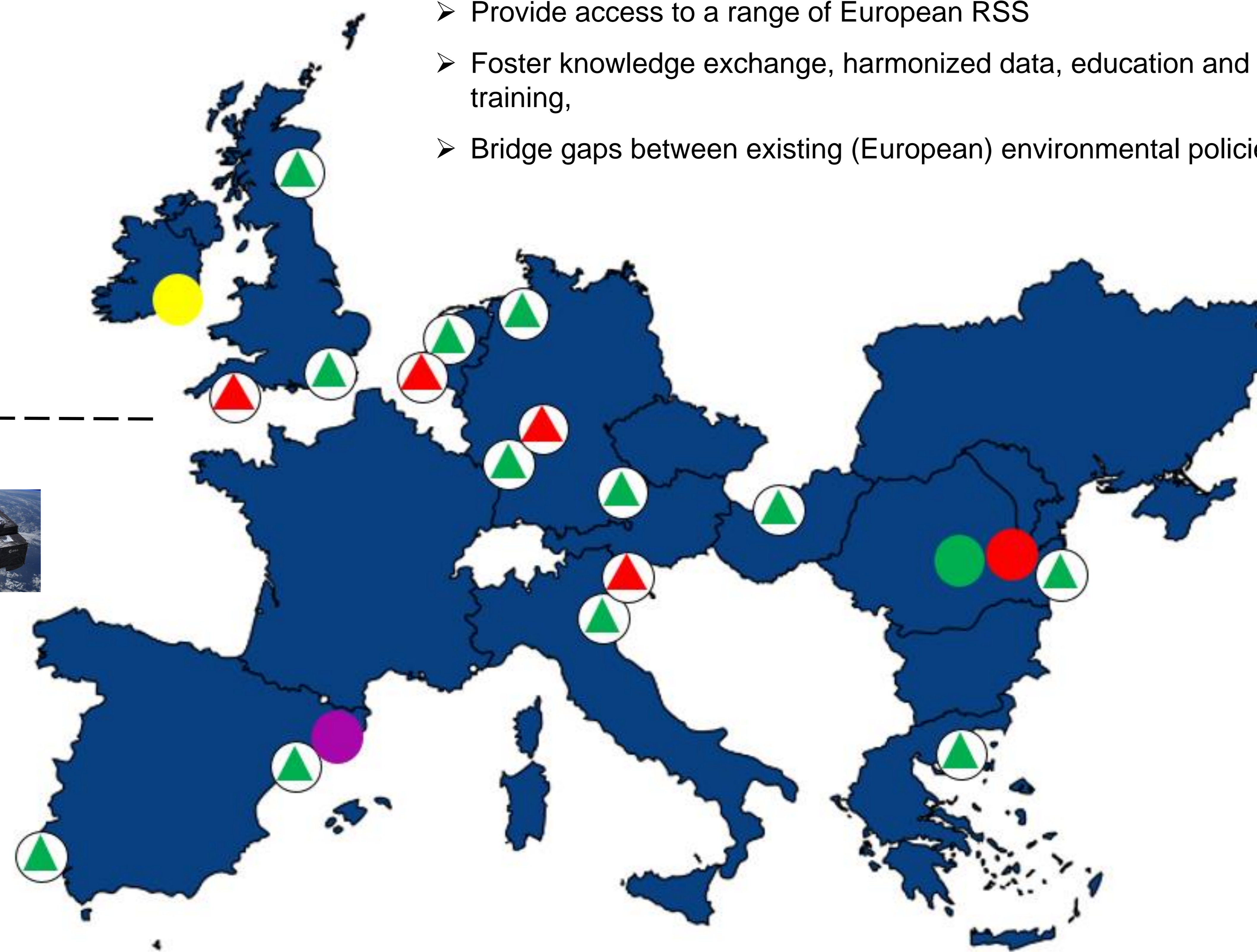


- Flood and drought management
- Navigation and impoundment
- Land-use policy and management
- Industry, agriculture and stockbreeding
- Fishing, energy and recreation

Anthropogenic pressures

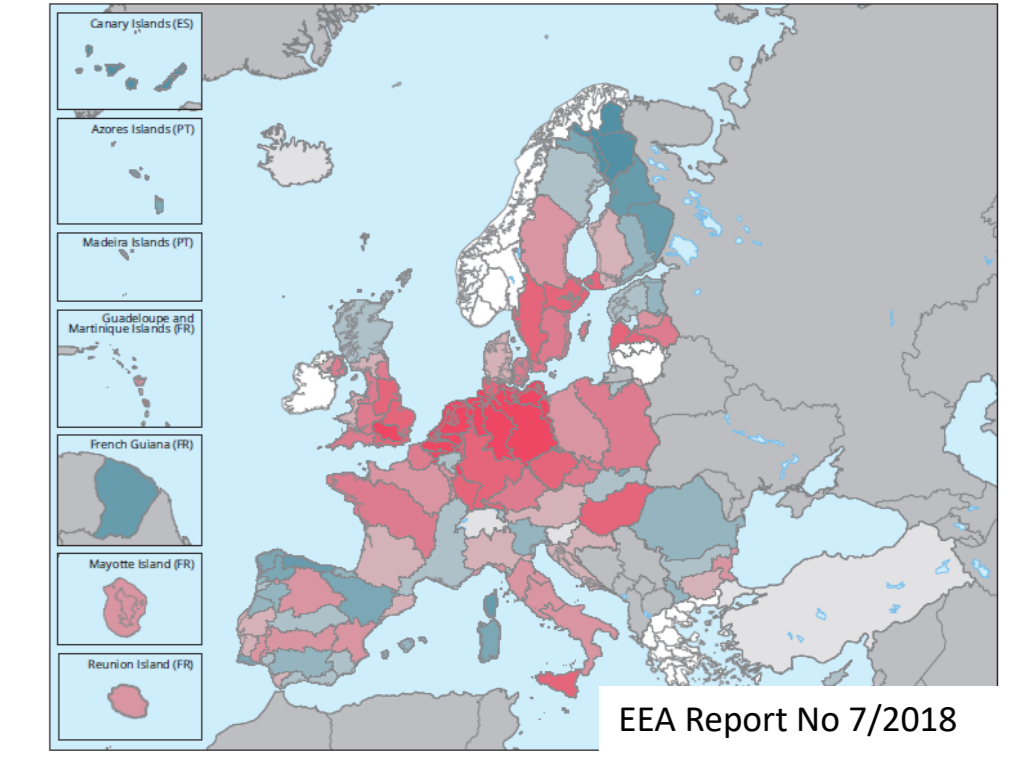
The International Centre for Advanced Studies on River-Sea Systems – DANUBIUS-RI

- Address conflicts between society's demands and healthy RSS worldwide
- Conjoin research on freshwaters and the interface to marine waters
- Provide access to a range of European RSS
- Foster knowledge exchange, harmonized data, education and training,
- Bridge gaps between existing (European) environmental policies



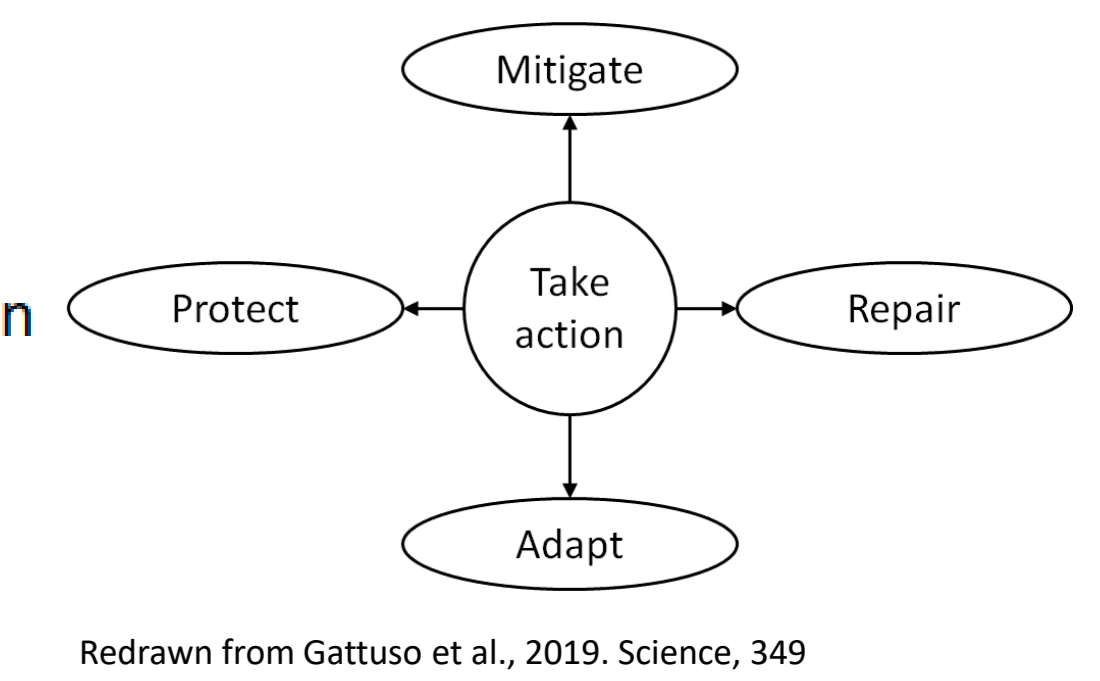
Scientific challenges

- Healthy RSS in a changing climate
- Water sufficiency (quality and quantity)
- Sediment management
- Ecosystem health
- Societal acceptance

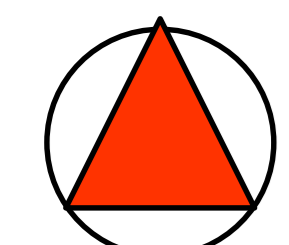


Healthy River-Sea systems (RSS)

- Interdisciplinary research on RSS
- Ready-to-use facilities
- Equipped sites with long-term operation
- Cross-system studies
- Capacity building and learning

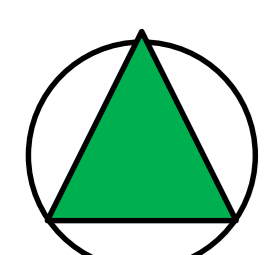
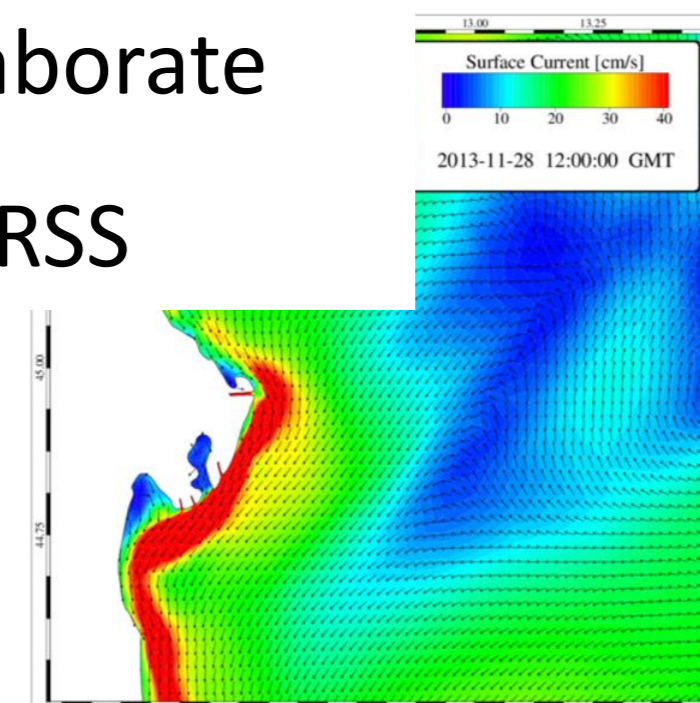
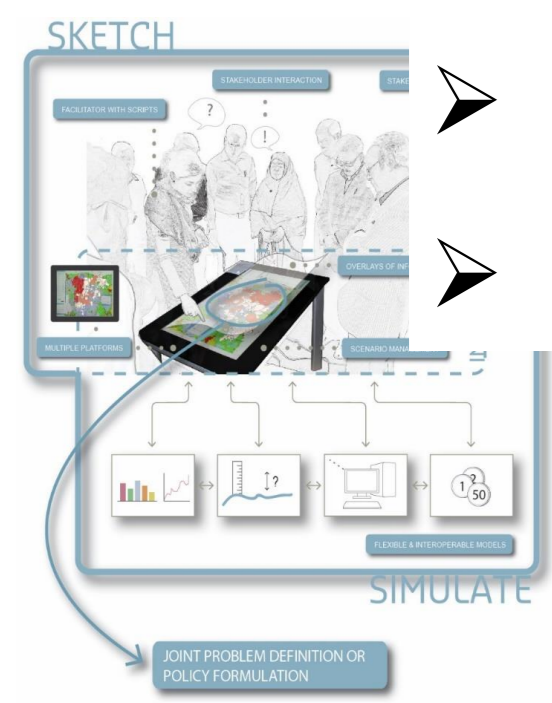
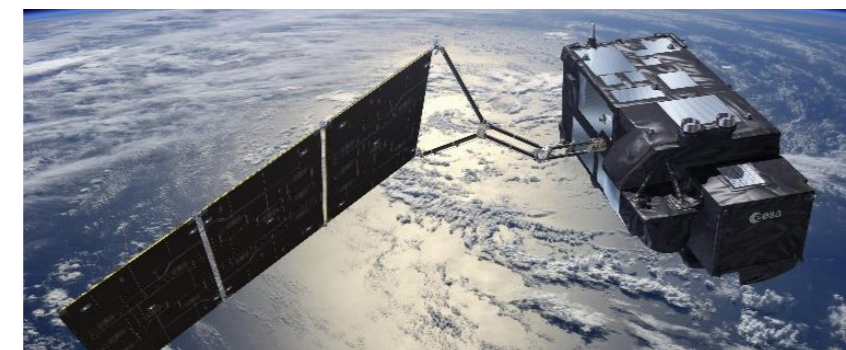


Implementation framework



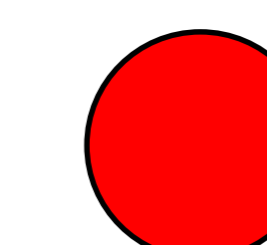
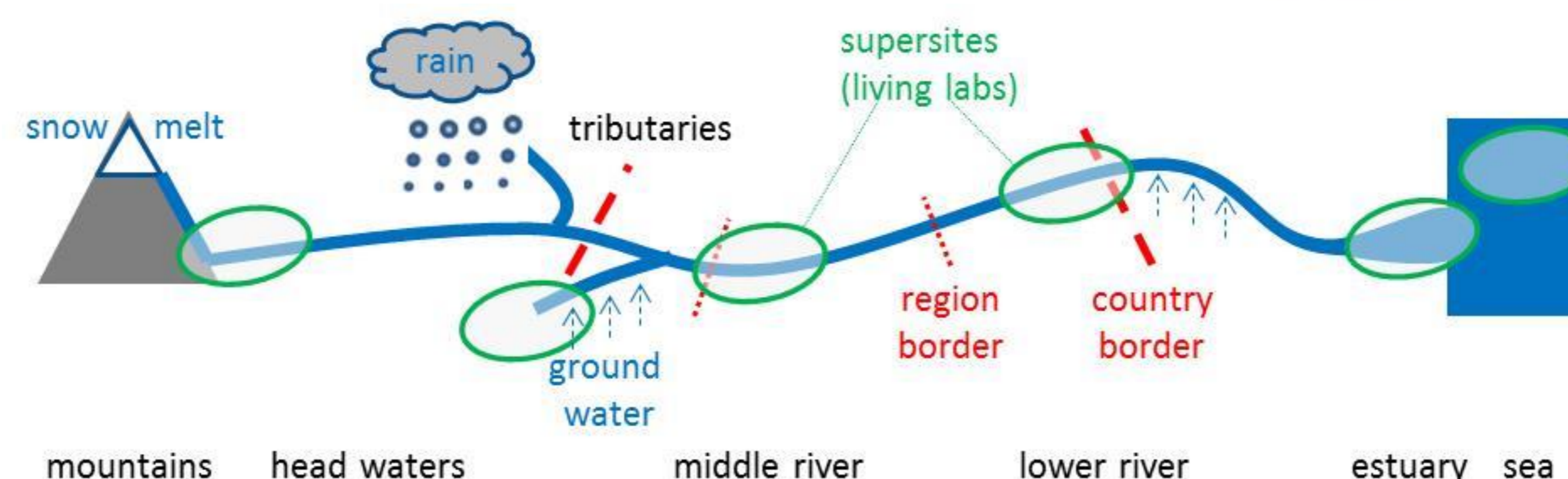
The Nodes

- Observation: *in situ*, satellite, real-time
- Analysis: biogeochemistry, life sciences
- Modelling: simulate, interpolate, elaborate
- Impact: from knowledge to healthy RSS

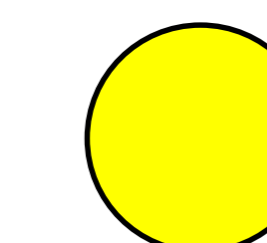


The Supersites

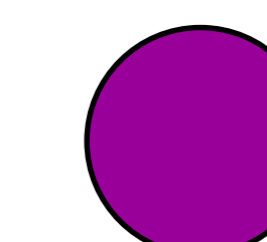
- Living laboratories for observation, research, modelling and innovation
- Covering RSS from river source to transitional waters and coastal seas
- Ranging from the near pristine to the heavily impacted
- Supporting and fostering research at other locations



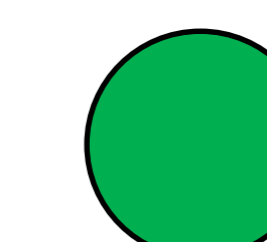
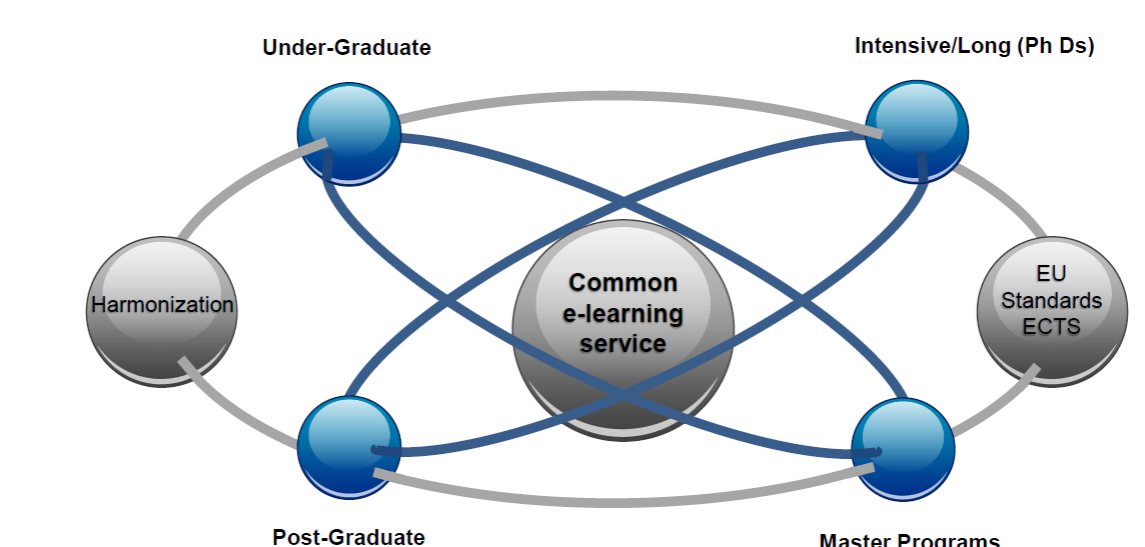
The Hub
Management, coordination and capacity building



The Technology Transfer Office
Balancing research freedom, green economic growth and employment



The E-learning Office
Common e-learning services, virtual laboratories



The Data Centre
Data availability (including non-digital data and metadata), data processing and access