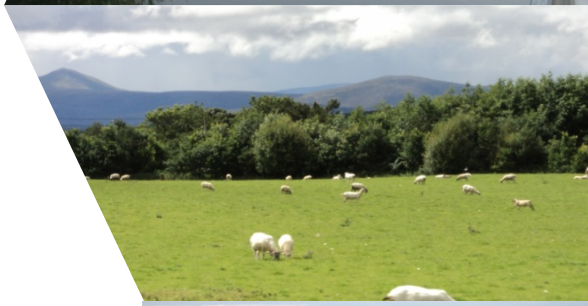
eLTER

Integrated European
Long-Term Ecosystem
Critical Zone &
Socio-ecological Research
Research Infrastructure

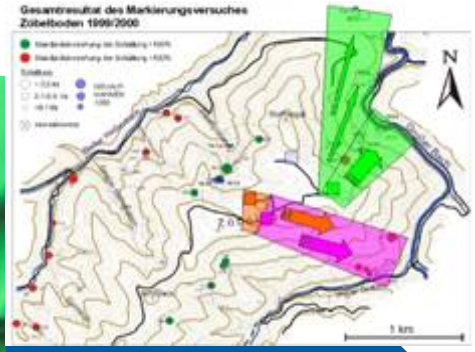




ESFRI Roadmap 2018 launch

Michael Mirtl
UFZ/Germany & EAA/Austria
eLTER Coordinator
...on behalf of the eLTER ESFRI core team and LTER communities

Example for eLTER Site design, activities and co-location



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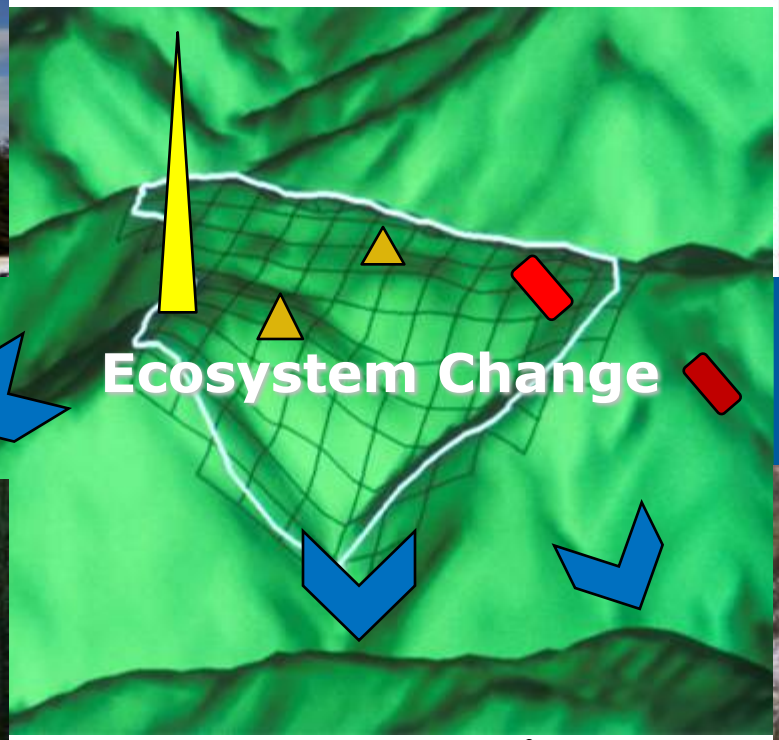


Output

Co-location: Atmosphere, e.g. ICOS; Experiments; Hydrology

LTER Research responding to Grand Challenges

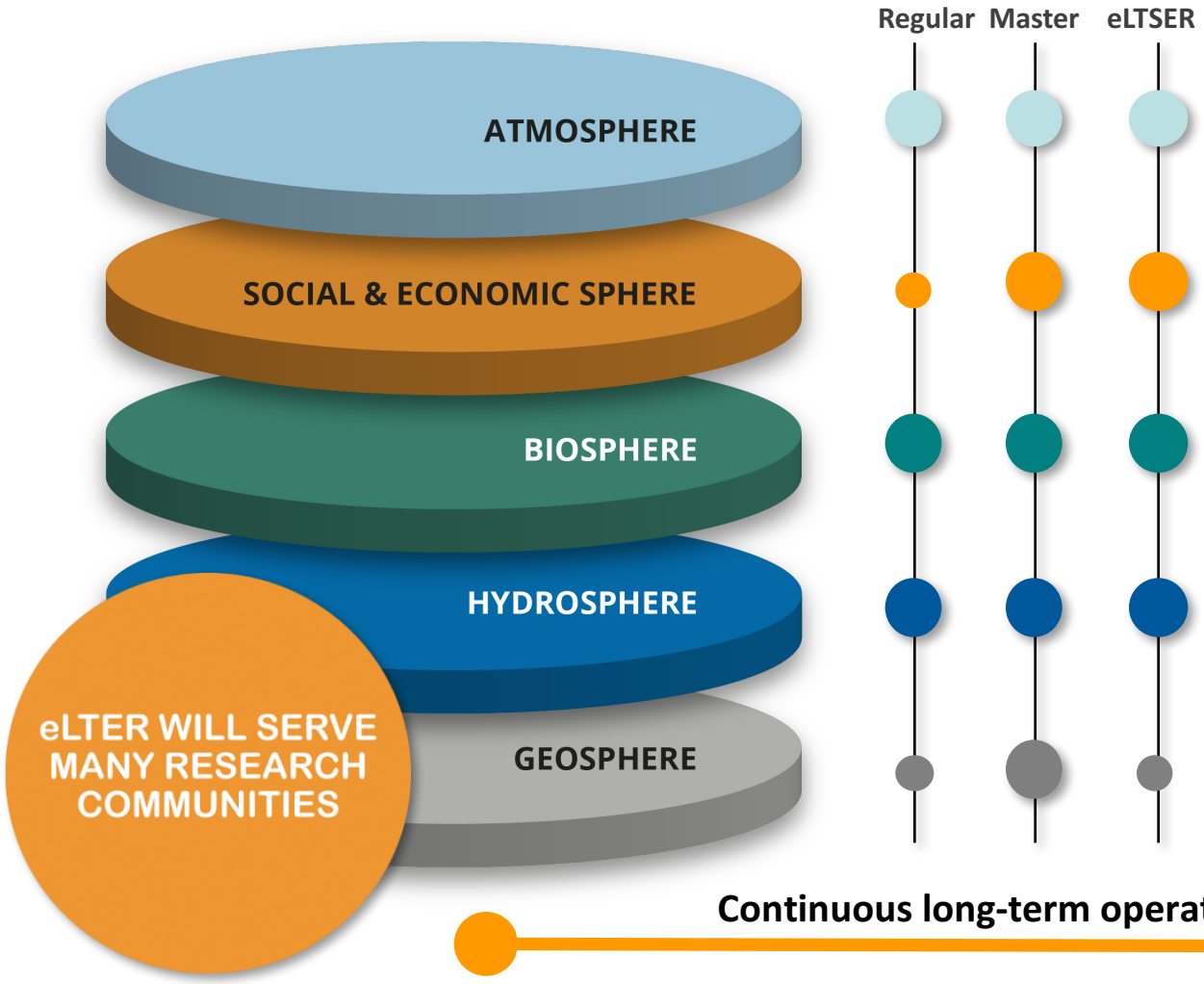
- **Climate change**
- **Biodiversity and land use**
- **Biogeochemistry and pollution**
- **Sustainable socio-ecological systems** (LTSER)

Observed and investigated:

- **System structure & functions**
- **Main drivers**
- **Disturbance effects (slow presses, fast pulses – extreme events)**

eLTER

„Whole System“-Approach & cross-disciplinarity for the Live Supporting System



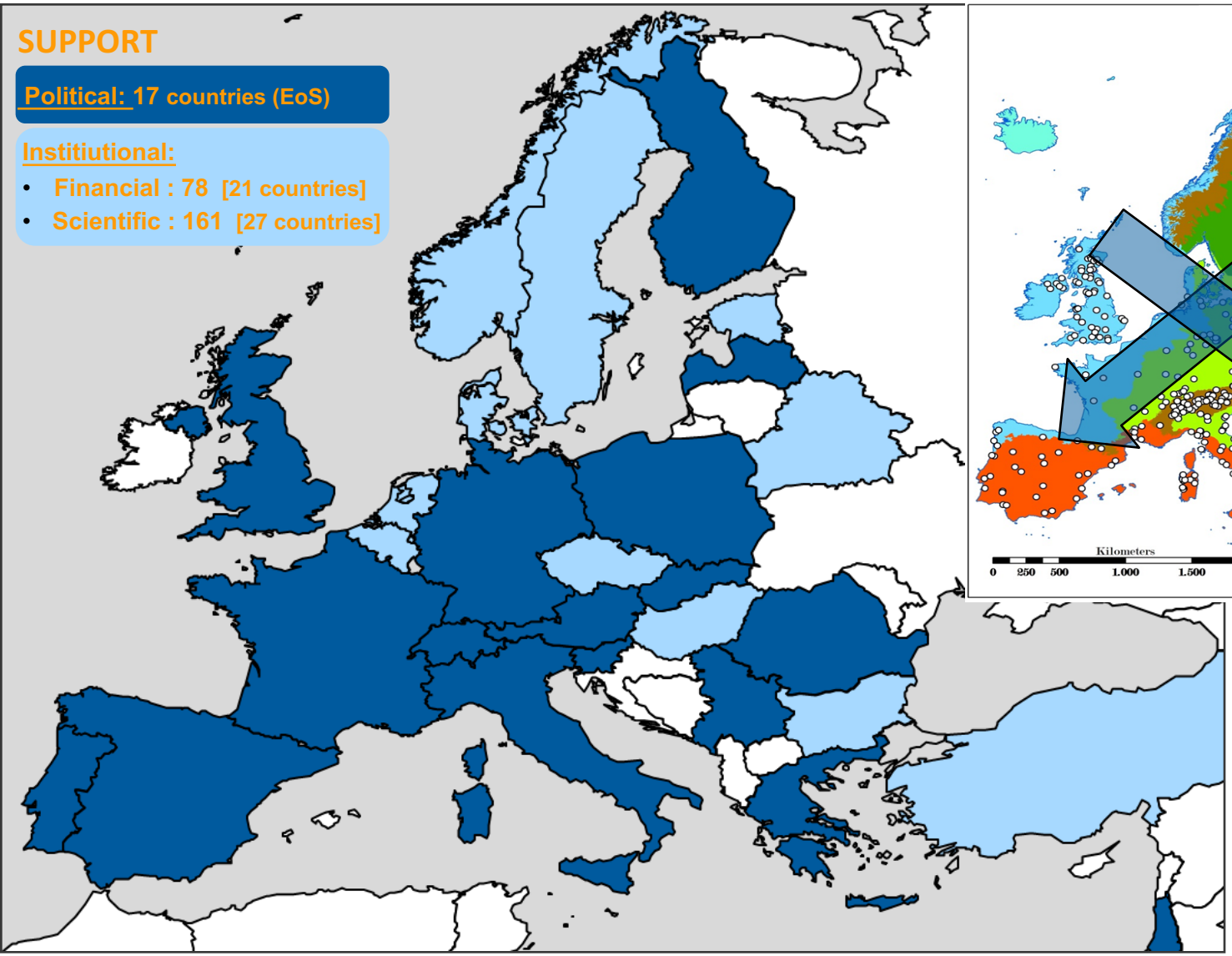
Site categories
differ in their focus on different system layers

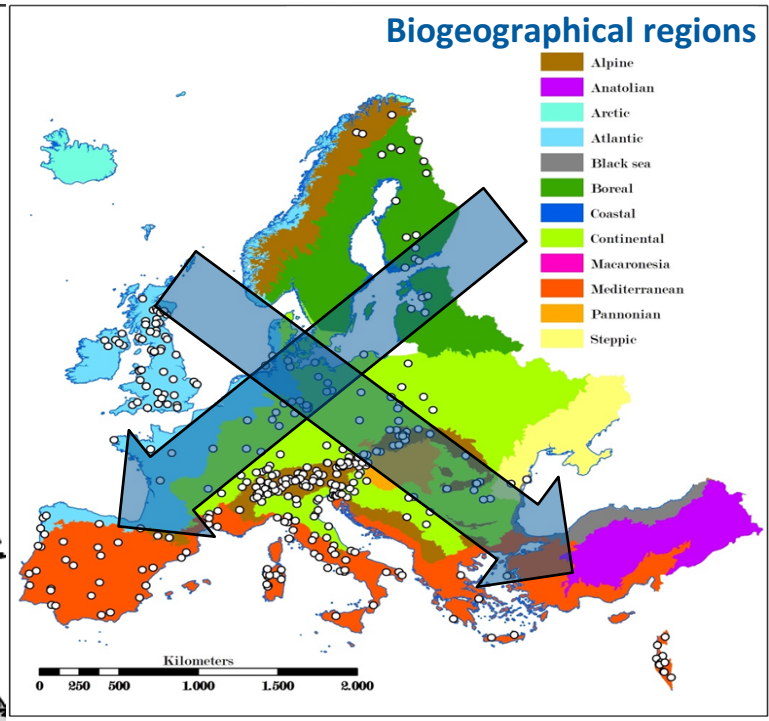
eLTER provides

- Basic site infrastructure
- Integrated baseline observation of “EEVs”
- User access to
  - in-situ sites
  - data
- Other services

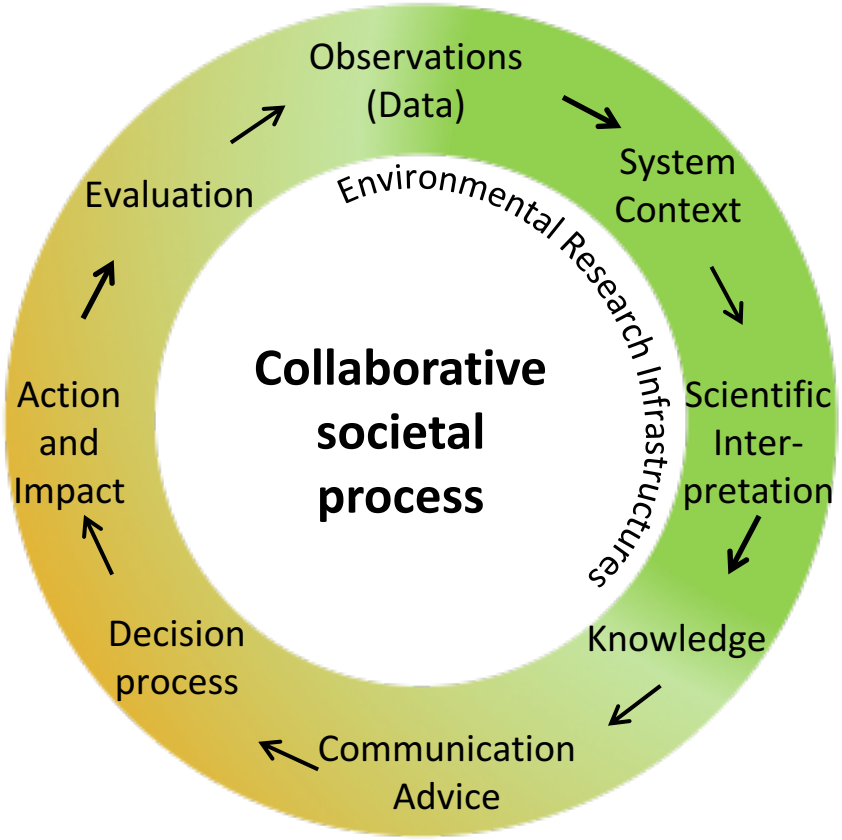
Continuous long-term operation of ~200 innovative hubs

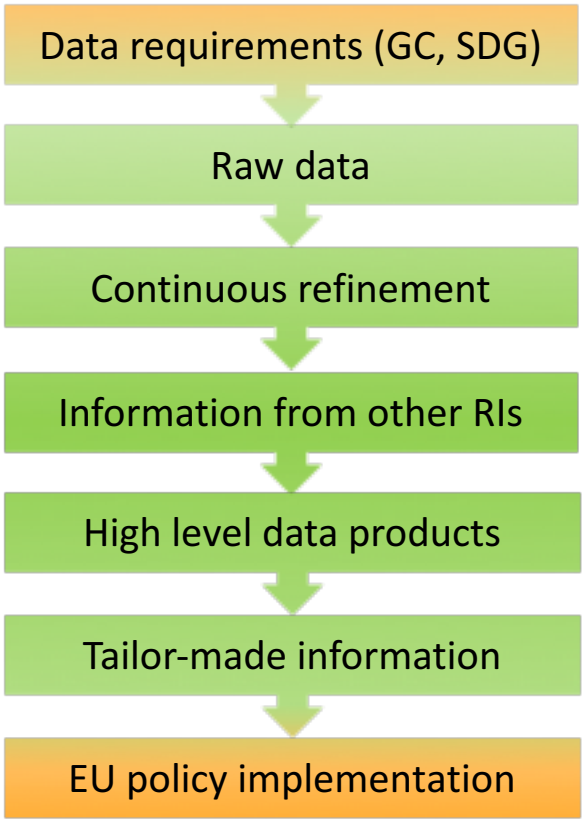
Stakeholder support, coverage and representativity





Societal and economic impact as a collaborative process

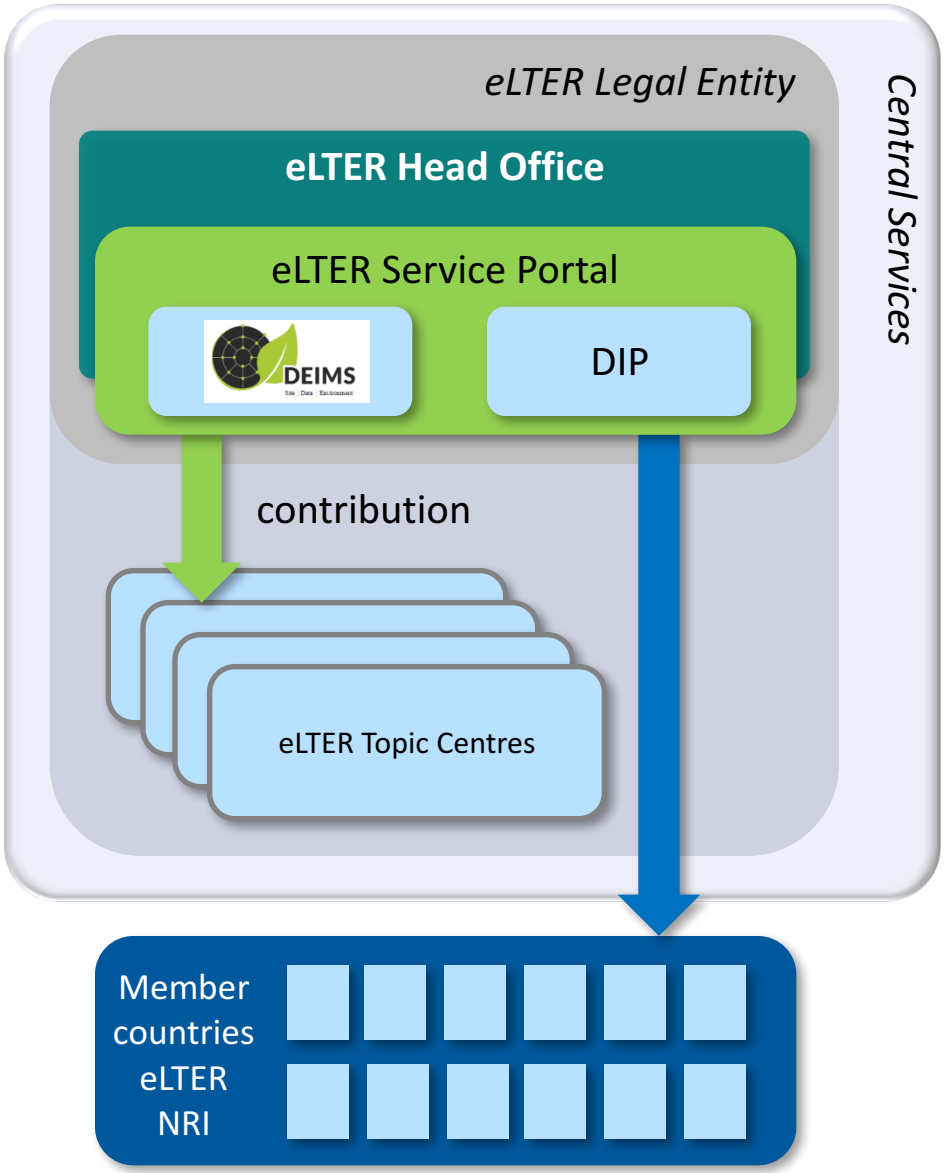




Exemplary frameworks for environmental policies, e.g.:

- Strategy on adaptation to **Climate Change**
- **Biodiversity** Strategy
- **Habitats** Directive
- **Water** Framework Directive
- **Soils** thematic strategy
- **NEC** directive

eLTER RI organizational structure



Topic Centers

- ***Quality Assurance for Data***
- ***Modelling and Analysis Tools***
- ***Design Interoperability and Synthesis***
- ***Technological Innovation and Development***

Contributions to SDGs

Addressing the Grand Challenges requires long-term observation, basic & applied research, and trans-disciplinary approaches

eLTER **will**

- **Align investments** for ecosystem research in ERA and globally
- Closely **collaborate** with related RIs
- Ensure **scientific excellence** in European ecosystem research
- Facilitate **evidence-based policy**-making
- Enhance the **sustainability of ecosystem services**