INTEGRATED EUROPEAN LONG-TERM ECOSYSTEM, CRITICAL ZONE & SOCIO-ECOLOGICAL RESEARCH INFRASTRUCTURE

AN EMERGING ESFRI RESEARCH INFRASTRUCTURE

We live in world of rapid social, economic and environmental change, facing major environmental issues such as global warming, biodiversity loss and unsustainable pressure on natural resources. To address these problems requires world-class ecosystem research by a well-connected, extensive community of experts, supported by advanced sites and facilities, openly shared, easily accessible data and capacity building programmes. This is the goal of the European LTER Research Infrastructure, eLTER.

KEY FEATURES OF eLTER:

- **Long-term** continuous collection, provisioning and use of ecosystem data
- ***In situ* data** from approximately 250 selected long-term environmental observation and research sites, drawn from a wider pool of about 400 sites
- **Wide scale and systematic**, with coverage of major terrestrial and aquatic environments in the critical zone
- Enables **research into ecosystem processes** influenced by multiple drivers, as well as socio-ecological research relating to ecosystem services
- **System approach**, studying interactions of abiotic and biotic ecosystem components at different scales

www.lter-europe.net

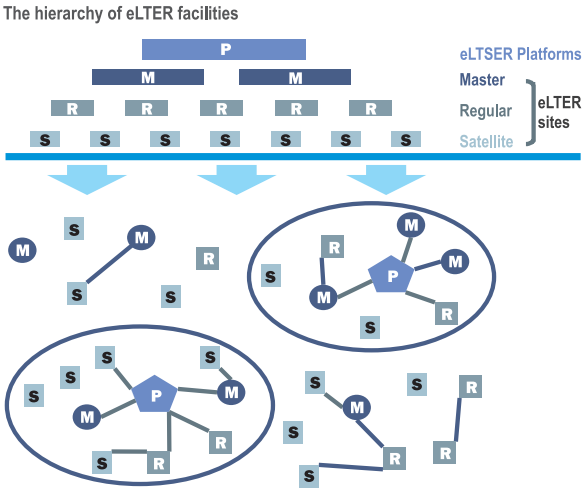
WHAT WILL eLTER OFFER?

- Scientific knowledge based on long-term studies of European ecosystems and responding to a range of Grand Challenges
- A well-integrated system of research site categories ranging from socio-ecological research platforms to well-staffed and highly instrumented LTER sites, complemented by satellite sites, well-harmonized with European environmental sister RIs and embedded in the global context of ILTER
- Physical access to these research sites in a wide variety of terrestrial and aquatic environments, from near pristine to urban. Scope for resource efficient co-location with other RIs
- Open access to a vast amount of biotic, abiotic and social science data
- Online portal providing access to site information, datasets, contacts and more
- Platforms and services to support the development and testing of new technologies, such as advanced environmental monitoring systems
- Ground-based observations valuable in calibrating, validating and developing remote sensing

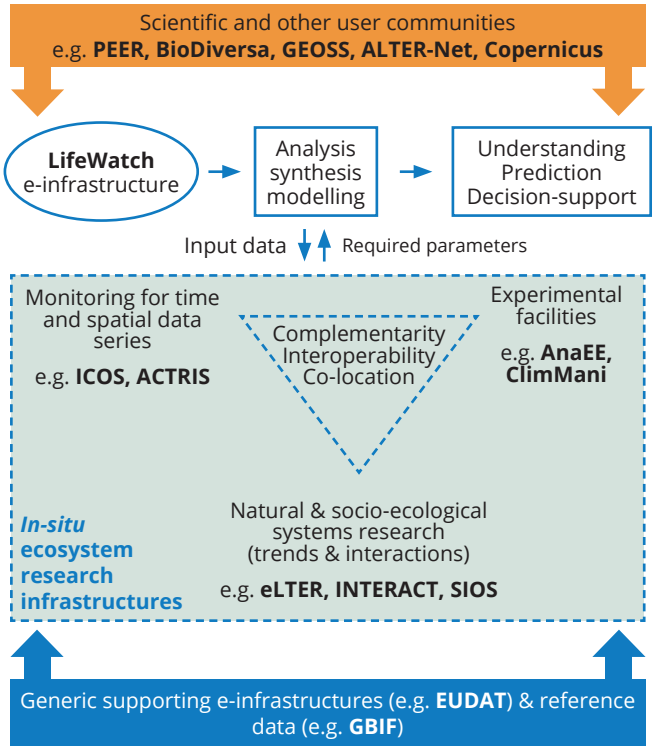
- Education and training to nurture the next generation of ecosystem researchers and support education and citizen science programmes
- Coordinated support from a wide range of experts in multi-disciplinary environmental science and data management.

INTEGRATION AND COORDINATION OF FACILITIES AND INFRASTRUCTURES

eLTER envisages a hierarchy of facilities comprising large eLTSER platforms and eLTER sites (with different degrees of instrumentation and ecosystem/component coverage). Some eLTER sites will be nested in eLTSER platforms



Assembling eLTER facilities according to regional conditions across Europe



eLTER aims to work closely with other relevant European *in situ* ecosystem and biodiversity RIs, user communities and supporting service infrastructures

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