

Motivation and Results

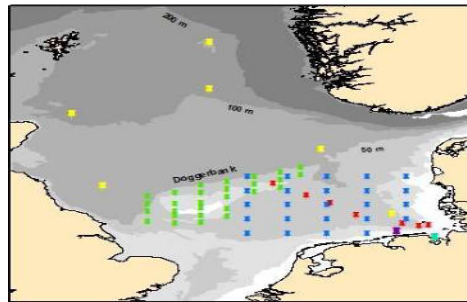
We generate and analyze systemic long-term biodiversity and environmental data and trends (approx. 10-100 years).

- Leading roles in LTER networks and international research activities
- We supported to bring the European LTER network (eLTER RI) on the ESFRI roadmap
- Leading roles in developing and harmonizing monitoring methods and frameworks for systemic long-term ecological research

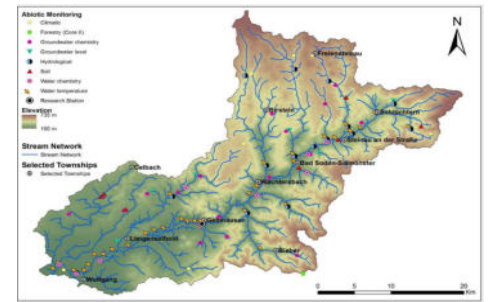
Contribution to SGN Program Portfolio

- Which methods and frameworks are most applicable for the systemic monitoring of long-term ecological changes?
- Advancements in the understanding of nature by integrating geological and biological sciences (Geobiodiversity research)
- Ideal "Model Regions" for the future RF „Anthropocene Biodiversity Loss“.
- Cooperations with RA 1.1, 2.2, 3.1, 3.3

North Sea Benthos Observatory (1970)



Rhine-Main-Observatory (2001)



City of Frankfurt Observatory (1985)

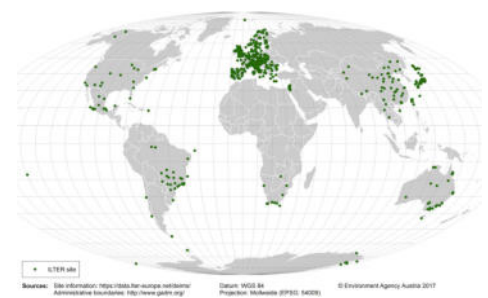
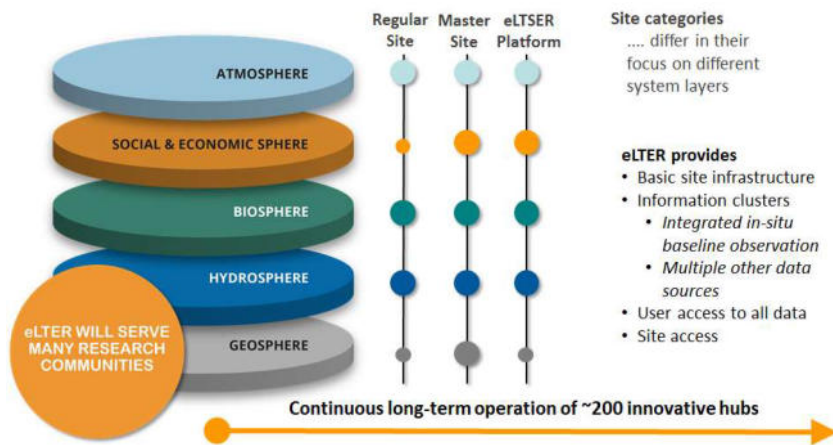


DFG-Biodiversity Exploratories (2007)



1 The eLTER RI whole system approach

2 The four SGN Observatories



3 Global distribution of LTER sites

Outlook

- Expand leading role in biodiversity time series analyses (*in situ* environmental drivers; traits)
- Develop "Essential Ecosystem Variables" (eLTER PLUS project) & expand and further harmonized *in situ* monitoring in the SGN observatories
- Establish eLTER RI at a continental scale (eLTER PPP project) & implement social-ecological research and stakeholder engagement.

Science of the Total Environment

Genesis, goals and achievements of Long-Term Ecological Research at the global scale: A critical review of LTER and future directions

M. Metzger¹, E. T. Borer², J. Dobson³, M. Fortin⁴, H. Harbold⁵, W. Hogg⁶, J. Janssen⁷, D. Lindenmayer⁸, W.H. McDowell⁹, H. Morita¹⁰, D.E. Ostrom¹¹, J.C. Paine¹², J. Petersen¹³, H. Shibata¹⁴, C. Wolner¹⁵, X. Yu¹⁶, P. Haase¹⁷

Highly Cited Paper

Science of the Total Environment

The next generation of site-based long-term ecological monitoring: Linking essential biodiversity variables and ecosystem integrity

Peter Haase¹, Jonathan D. Tonnesen², Stefan Schulze³, Benjamin Burkhard⁴, Mark Finze⁵, Ben K. Carpenter⁶, Christoph Häsel⁷, Stefan Klotz⁸, Ingrid Kröncke⁹, William H. McDowell¹⁰, Michael Metz¹¹, Fels Müller¹², Martin Mosche¹³, Johannes Perner¹⁴, Steffen Zacharias¹⁵, Dirk S. Schellert¹⁶

Hot Paper
Highly Cited Paper