

Involvement of CENAKVA in LTER-CZ activities - Long-term Ecosystem Research

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AIMS OF LTER-CZ

Long-Term Ecosystem Research (LTER) is a network of research sites used to investigate ecosystems, particularly with respect to the impact of human activity on the state and development of experimental sites in the long-term perspective. Long-term monitoring allows early detection of alterations in ecosystems corresponding to global changes such as drought or various types of pollution. Detailed research is



necessary to understand the complexity of ecosystem behaviour using general ecological principles and enables early detection of those hidden in the 'noise' of high environmental variability. This research is necessary for the reliable prediction of future changes in ecosystems. In addition to a purely scientific perspective, LTER includes socio-ecological research dealing with interactions between ecosystems and society. The LTER-CZ network of research sites currently consists of 23 sites, four of which are part of the LTSER platform (Long-Term Socio-Ecological Research).

The Czech National Committee for ILTER (International Long-Term Ecosystem Research) is the governing body of the LTER-CZ. It comprises site coordinators, as well as experts and representatives of major Czech institutions involved in ecological research. Thanks to the provisional political support of the Ministry of Education, Youth and Sports, LTER-CZ could in 2020 fully and officially join the decision process in the building of the future pan-European research infrastructure eLTER RI, which has been on the European roadmap of large research infrastructures since 2018.

CENAKVA CENTRE INVOLVEMENT

The CENAKVA Centre manages the Elbe River research area. It coordinates activities related to the provision of data to users in open access system. The long-term environmental research of the Elbe basin started in 1993 under the auspices of the Ministry of the Environment of the Czech Republic. Currently, the Czech Hydrometeorological Institute, Prague, and about ten cooperating research institutions, namely two of them, the Povodí Labe s.p., and the Povodí Vltavy s.p., participate in data collection. More than 600 physicochemical parameters, including water sensory properties, are regularly monitored in at least nine different types of matrices (water, sediment, periphyton, floats, benthos, fish tissues, fish fry, and *Dreissena polymorpha* tissues) and using passive samplers. Among the main monitored characteristics belong balances of macroelements (carbon, nitrogen, oxygen, phosphorus), concentrations of inorganic salts, heavy metals and various organic pollutants such as pesticides, personal care products (including drugs) and other anthropogenic substances in the environment. Characteristics such as abundance and species composition are regularly monitored in fish, macrophytes, macrozoobenthos, phytobenthos and plankton.

MORE INFORMATION

<https://lter.cz/en/elbe-river>

<https://deims.org/858b9f78-889f-4acb-8a12-c3c2436d794c>



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