

## Long term ecosystem research

Institute of Hydrobiology and Aquatic Ecosystem Management, Vienna, Austria

### Abstract

The idea of LTSER platforms (long term socio-ecological research) combines as subject of investigation entire landscapes with their manifold interactions between society and natural environment including social, economic and historical utilization aspects with classical longterm ecosystem research. This enables phenomena with social characteristics, such as hunting and wild animal management, the establishment and interaction of conservation areas with their surrounding environment or the effects of changes in production and consumption upon resource requirements, land use and ecosystems to be researched (MIRTL et al. 2010). The central question addressed by long-term ecosystem research as summarized by MIRTL et al. (2010) is: How do ecosystems respond to changes such as climate or human utilization in the long-term at different spatial and temporal scales? In line with this concept and ideas, nationalparks and protected areas would be excellent areas to establish long term ecosystem research in the majority of cases and could demonstrate the effects of long term changes based on their high natural values, high sensitivity, the controlled human utilization and well developed management plans.

The LTER activities worldwide are organized in different networks of scientists and would support also local research activities and provide an exchange of research results. Still in Austria the minority of protected areas are part of this research strategy beneficial for individual research needs of particular areas and of high value for an overall understanding of ecosystem changes. Based on the existing research platforms such as the LTSER platforms High Alps and Eisenwurzen we do see a need to expand this research strategy to other areas including especially riverine landscapes as these types of ecosystems show a high extent of alteration, multiple human pressures and thus, these systems are highly endangered.

### References

MIRTL, M., BAHN, M., BATTIN, T., BORSODORF, A., ENGLISCH, M., GAUBE, V., GRABHERR, G., GRATZER, G., HABERL, H., KREINER, D., RICHTER, A., SCHINDLER, S., TAPPEINER, U., WINIWARTER, V., ZINK, R. 2010. Next Generation LTER“ in Austria - On the status and orientation of process oriented ecosystem research, biodiversity and conservationresearch and socio-ecological research in Austria. LTER-Austria Series, Vol. 1, ISBN 978-3-901347-94-8.<http://www.lter-austria.at>

### Contact

Institute of Hydrobiology and Aquatic Ecosystem Management  
University of Natural Resources and Life Sciences  
Max-Emanuelstrasse 17  
1180 Vienna  
Austria

