



UFZ-Seminar „Wasser and Environment“



November 16th, 3 pm

Seminar room 1, Brückstr. 3a, Magdeburg

River restoration under multiple stress conditions

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The vast majority of European rivers does not meet the quality targets defined by recent legislation, in particular the EU Water Framework Directive; consequently, these river sections need to be restored. Based on monitoring data, I will give an overview on which stressors and stressor combinations are being responsible for river deterioration at European and national scales. Two recent case studies on river restoration will be presented: First, a Europe-wide analysis of restoration effects on a large number of compositional and functional parameters, targeting the question if the length of the restored section or the degree of habitat alteration determines restoration effects. Second, the analysis of Europe's largest river restoration project, the Emscher revitalization; here, about 300 km of open sewer are transformed into a near-natural state providing ideal conditions to analyse recolonization. The results of both case studies highlight the strengths of current restoration approaches, but also the limitations, and will be discussed under the question if (and how) the ambitious European environmental quality targets can be reached.

References

- Hering, D., J. Aroviita, et al. (2015): Contrasting the roles of section length and instream habitat enhancement for river restoration success: A field study on 20 European restoration projects. *Journal of Applied Ecology*, doi: 10.1111/1365-2664.12531.
- Hering, D., L. Carvalho, et al. (2015): Managing aquatic ecosystems and water resources under multiple stress - An introduction to the MARS project. *Science of the Total Environment* 503–504: 10–21.
- Winking, C., A.W. Lorenz, B. Sures & D. Hering (2014): Recolonisation patterns of benthic invertebrates: a field investigation of restored former sewage channels. *Freshwater Biology* 59: 1932–1944.

If you are interested to join via Video-Conference to UFZ Halle or UFZ Leipzig, please send a note to nina.baumbach@ufz.de by Friday, 13.11.15., 12am.