Field training course in Silkeborg, Denmark

European research projects offer the opportunity to collect data over a wide geographical range, which is in most cases not possible for single institutes. On the other hand, any fieldwork performed in EU projects faces the danger of poor comparability, due to differences in sampling and sample processing between institutes. To tackle this problem REFORM scientists organized a field training course for all staff involved into fieldwork. Fieldwork will be performed in a selected number of case studies in Central and Northern Europe. These case studies are presented on the REFORM website (http://www.reformrivers.eu/study-sites). The aim is to compare the dimension of river restoration projects and the interaction within the catchment on the effectiveness of the restoration measure.

The training course was hosted in May 2012 by the Danish REFORM partner, Aarhus University, in a field station close to Silkeborg. Scientists and technicians from Finland, Sweden, Denmark, UK, Germany, The Netherlands, Poland, Czech Republic and Austria participated, i.e. almost all partners involved into field work within REFORM's Workpackage 4, in which restored and non-restored river stretches will be comparatively analyzed in several European countries. The only country from which no scientists attended was Switzerland, as most of the fieldwork planned there will be performed by some of the above partners.

Photo: Cross-sections for recording river hydromorphology (Picture by Kathrin Januschke)

The training course started with half a day of theory. Background and procedure for all field methods, which will be applied to the study of rivers, were presented and discussed. The range of methods covers a standard hydromorphological survey, transect methods to record habitat

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composition in the river and its floodplain, the sampling of stable isotopes to analyze food webs and land-water interactions, and the sampling of five organism groups: fish, benthic invertebrates, aquatic macrophytes, floodplain vegetation and riparian ground beetles to cover both longitudinal and lateral components of river-floodplain ecosystems.

The second day was devoted to the practical demonstration and training of the methods in the field. For this purpose, the participants visited the two rivers, which will be studied by the Danish project partner in REFORM: the Stora and the Skjern. Along the Stora a relatively small stretch was restored, mainly by adding gravel as a spawning ground for salmonids; the Skjern catchment hosts one of Europe's largest river restoration projects, where the whole floodplain was included over a length of several kilometers. Weather conditions turned out to be realistic for fieldwork in Northern Europe; for most of the day the rain felt horizontal due to strong wind. However, the training effect was particularly high, as all participants will remember this field work vividly. And it showed that the methods are applicable even under adverse weather conditions.

Photo: Periphyton and macroinvertebrate sampling for stable isotope analysis (Picture by Kathrin Januschke)

The workshop closed with half a day of discussion about the methods. This led to some adaptations, in particular of the method for recording floodplain vegetation. Following the meeting the protocols describing the methods were adapted, are now ready for use and available as one of the first deliverables of the project.

Overall, it was a successful and intense meeting, which was scheduled in an ideal way directly before the fieldwork – which is starting in June 2012. The hydromorphological methods and the stable isotope sampling will now be applied to almost all study rivers, while the sampling of the biological variables will partly be performed in 2012 and partly in 2013.

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