



Addressing the assessment of the ecological status of temporary streams; The "MIRAGE Tool-Box"

N. Prat (1), F. Gallart (2), M. Rieradevall (1), J. Froebrich (3), and the MIRAGE Tool-Box Team

(1) Dep. Ecology, U. Barcelona, Barcelona, Spain (nprat@ub.edu), (2) IDAEA, CSIC, Barcelona, Spain (francesc.gallart@idaea.csic.es), (3) Centre for Water and Climate, Alterra, Wageningen UR, Wageningen, The Netherlands

The assessment of the “ecological status” of water bodies, as requested by the European Water Framework Directive, is a cumbersome issue when it has to be applied to temporary streams. At the moment of sampling, the stream may be at the process of drying or, at worst, stream water may be even absent. In these conditions, the reference quality standards developed for permanent water bodies may not be applicable. Work conducted within the Collaborative MIRAGE EU-funded project (grant FP7 n° 211732) addressed most of these difficulties, and the diverse approaches used to solve them are brought together in the so-called ‘MIRAGE tool-box’. This box consists of a general scheme based on the concept that qualitative states of the stream (such as the presence or absence of flowing water) are more relevant than the quantitative measures of water flow, along with a set of tools based on the project deliverables and published papers. The ‘tools’ included in this box deal with several issues, to know: the determination of the hydrological regime of the stream in terms of the relevance for aquatic life, the design of calendars for biological and chemical sampling, the fulfilment of criteria for reference conditions, the analysis of hydrological modifications of the stream regime, the representativeness of samples taken at different moments, and the development of new standards when stream hydrological conditions are far from those in permanent streams.