Prospecting for historical fish data from the Rhone River basin: a contribution to the assessment of reference conditions

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With 3 figures and 1 table

Abstract: This paper presents rare cartographic historical fish data known from the Rhone River Basin, which give spatial and exhaustive data on fish assemblages. The maps may play a role in current research about fish reference conditions. The information recorded in these archives is presented and forms the basis of a critical analysis in order to define the limits of their use.

Introduction

At the turn of the century, the focus for both water resource managers and aquatic ecologists is the restoration of altered aquatic ecosystems. The European Water Framework Directive (EUR-Lex 2000) formalised these imperative requirements and enacted the principal goals of a real joint community will. Amongst the environmental objectives are the protection, enhancement and restoration of all water bodies “with the aim of achieving good ecological status at the latest 15 years after the date of entry in force of the Directive”. The first phase in the implementation of this directive aims at evaluating the quality of water bodies and defining their ecological status relative to type-specific reference conditions.

The keynote of the WFD lies in the conceptualisation and practical application of type-specific biological reference conditions. Ideally, these may be spatially based on a network of sites with high ecological status. If not, they may be based on predictive models or hindcasting methods using among other approaches historical data. Expert opinion may be sought if the above methods prove impracticable. If difficulties in defining reference conditions increase with regard to abiotic and biotic differences across Europe, serious problems

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