

**ERA-NET CRUE Funding Initiative  
Research project fact sheet**

**Flood risk reduction by PReserving and restOring river  
FLOODPLAINS "PRO\_Floodplain"**

BOKU - Vienna, Institute for Water Management, Hydrology and Hydraulic Engineering

University of Karlsruhe, Institute for Water and River Basin Management

Université Marc Bloch - Strasbourg, Groupe de recherche en urbanisme, environnement et styles de vie

**Executive summary**

The main objectives of this project are to identify and evaluate the hydromorphological contribution of water retention in preserved and restored floodplain systems across various geomorphological settings, to demonstrate the contribution of floodplain preservation and restoration to the achievement of the good ecological status and the investigation of the social acceptance of such non-structural measures. The transformation in a general floodplain evaluation matrix is aimed for on the basis of varying boundary conditions in different study reaches in Austria, Germany and France. The benefits and disadvantages of floodplain enlargement are compared with each other and considered in comparison with technical measures. In particular the restoration of floodplains as a contribution for the achievement of a "good ecological status" respectively a "good ecological potential" of the river in the sense of the European Union Water Framework Directive will be examined. An important aspect will be social acceptance of non-structural measures in the context of floodplain preservation and restoration.

**Intended outcome**

- Quantified contribution of water retention by floodplain inundation in lowland, midland and upland as well as mid- to large scale rivers
- Described specific flood risk reduction by preserved and restored floodplains according to defined parameters
- Newly derived floodplain evaluation matrix
- Demonstration and evaluation of the floodplain enlargement as a contribution to achieve a "good ecological status"
- Perception of different measures of the flood protection according to different participants or populations

**Project duration**

01.01.2007 – 30.06.2008

**Project costs [€]**

182.209 €

**Dissemination and implementation actions**

Exploitation and dissemination of the research results will be in the form of a synthesis, executive summary, written for practitioners and policy makers, demonstrating the efficiency of preserving and restoring river floodplains for flood risk reduction and at the same time reaching a good ecological status.

**Funded by**

Austrian Ministry of Infrastructure and Technology BMVIT (Austria), Ministère de l'Ecologie et du Développement Durable (France, Germany)

**Methods and data to be intended to use**

(i) theoretical considerations concerning the efficiency of non-structural measures in the context of integrated flood risk management, (ii) analysis of field data (floods), (iii) numerical simulation (hydrodynamic modelling), (iv) interpretation and extrapolation of laboratory investigations (v) Influences of floodplain enlargement on ecology (vi) quantitative investigation by questionnaire for certain aspects of floodplain restoration

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**Geographical focus of research (test sites)**

Different study reaches in Austria (mainly Danube), Germany (Rhine) and France (Rhine).