Geophysical Research Abstracts
Vol. 16, EGU2014-5907, 2014
EGU General Assembly 2014

The Prediflood database. A new tool for an integrated approach to historical floods in Catalonia (NE Iberian Peninsula), AD 1033-2013

Mariano Barriendos (1), Josep Carles Balasch Solanes (2), Jordi Tuset (3), and Josep Lluís Ruiz-Bellet (2)

(1) Department of Modern History, University of Barcelona, Barcelona, Spain (barriendos@telefonica.net), (2) Department of Environment and Soil Sciences, University of Lleida, Lleida, Spain, (3) RIUS Fluvial Dynamics Research Group, Forest Science Centre, Solsona, Spain

Available information of historical floods can improve the management of hydroclimatic hazards. This approach is useful in ungauged basins or with short instrumental data series. On the other hand, flood risk is increasing due to both the expansion of human land occupation and the modification of rainfall patterns in the present global climatic change scenario.

Within the Prediflood Project, we have designed an integrated database of historical floods in Catalonia with the aim to feed data to: 1) Meteorological reconstruction and modelling. 2) Hydrological and hydraulic reconstruction. 3) Human impacts evaluation, of these floods.

The firsts steps of the database design focus on spatial location and on the quality of the data sources in three levels: 1) Historical documentary sources and newspapers contemporary with the floods. 2) Local historiography. 3) Technical reports.

After the application of historiographical methodologies, more than 2300 flood records have been added to the database so far. Despite the completion of the database is still a work in progress, the firsts analyses are already underway and focus on the largest floods with catastrophic effects simultaneously on more than 15 catchments: November 1617, October 1787, September 1842, May 1853, September 1874, January 1898, October 1907, October 1940, September 1962, November 1982, October 1994 and others.