

BDHI: a French national database on historical floods

Towards a better memory of past floods

Michel LANG
Denis COEUR
Alexandre AUDOUARD et Marlène VILLANOVA-OLIVER
Jean-Philippe PENE
Contact : michel.lang@irstea.fr

Irstea – Centre de Lyon-Villeurbanne, UR Hydrologie Hydraulique
Acthys-Diffusion, Biviers
Université Grenoble Alpes, LIG, Grenoble
MEEM-DGPR, Paris

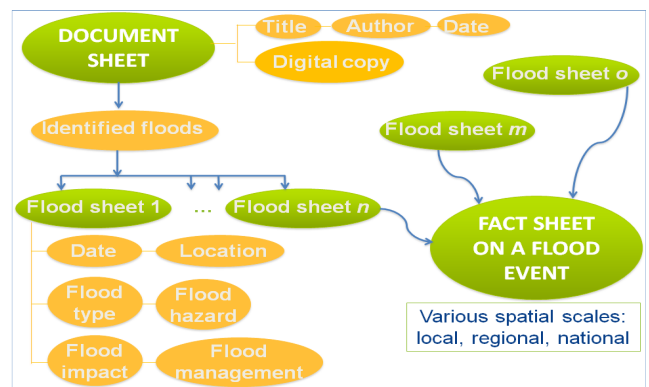


The Flood Directive (2007/60/EC)

Its aim to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. It asks to provide a description of the floods which have occurred in the past and which had significant adverse impacts

Database structure

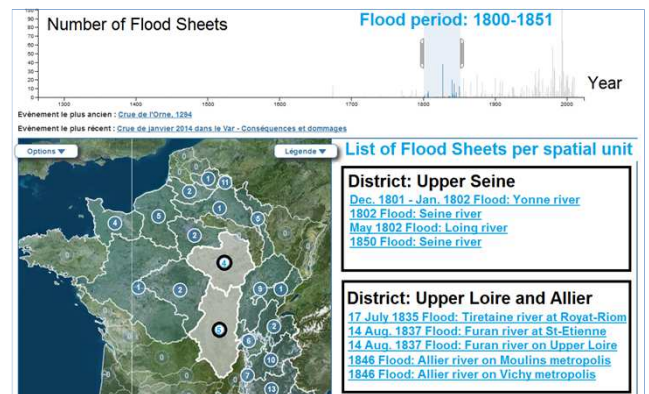
- Document sheet: access to original source document on floods
- Flood sheet: flood description according to a document
- Fact sheet: flood description according to a set of flood sheets



BDHI database structure

Query and visualisation tools

- Simple-complete query on the 3 kinds of sheet based on attributes: date or flood period, location, title, author, flood characteristics, flood impacts
- Spatio-temporal explorer: 3 dynamic and synchronized components
 - ❖ At the top: temporal window (number of flood sheets)
 - ❖ At the bottom left: spatial window (spatial units with the corresponding number of flood sheets)
 - ❖ At the bottom right: list of flood sheets that match a spatio-temporal request



Spatio-temporal explorer

Database content

- 176 flood events from 1770 to 2011
- About 1500 documents
- 7 and 8 catastrophic flood events (respectively with more than 100 deaths, EUR 1 billion of damages)

Link with other databases

- National internet portals on natural and technological risks: <http://www.prim.net/>, <http://www.georisques.gouv.fr/>
- Web site on extreme rainfall in France: <http://pluiesextremes.meteo.fr/>
- Web site on flood marks in France (planned at the end of 2016)

For more information <http://bdhi.fr/>

Lang M. and Coeur D. (2014). *Les inondations remarquables en France*, Ed. Quae, 640p

