



PoliRisposta: Overcoming present limits of flood damage data

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Already in the Fifties, US researchers identified the main weakness of flood records in the inadequacy of flood damage data. The recent seminar “Flood damage survey and assessment: which priorities for future research and practice?”, held at Politecnico di Milano on 24-25 January 2012, highlighted that poor and insufficient flood loss data is still a matter of concern. In detail, participants concluded that the lack of damage data and of innovative approaches for their analysis (e.g. multivariate approaches, data mining) is one of the main causes of the shortcomings of present risk assessment tools; among them: the uncertainty of flood risk predictions and the limited capacity of estimating damages apart from the direct ones to residential sector (i.e. indirect/intangible damages).

On the other hand, flood damage data collected in the aftermath of a disastrous event can support a variety of actions besides the validation/definition of damage models: the identification of priorities for intervention during emergencies, the creation of complete event scenarios on the bases of which understanding the fragilities of the flooded areas as well as defining compensation schemes. However, few efforts have been addressed so far on the improvement of the way in which data are presently collected and stored.

The aim of this presentation is to discuss first results of Poli-RISPOSTA (strumenti per la protezione civile a Supporto delle POpolazioni nel poST Alluvione), a research project founded by Politecnico di Milano which is just intended to develop tools and procedures for the collection and storage of high quality, consistent and reliable flood damage data. In detail, specific objectives of Poli-RISPOSTA are:

- Develop an operational procedure for collecting, storing and analyzing all damage data, in the aftermath of flood event, including: damage to infrastructures and public facilities, damage suffered by citizens and their dwellings and goods, and to economic activities;
- Develop educational material and modules for training practitioners in the use of the procedure;
- Develop enhanced IT tools (both hardware and software) to support the procedure, easing as much as possible the collection of field data, the creation of databases and the connection between the latter and different regional and municipal databases that already exist for different purposes (from cadastral data, to satellite images, etc.).

Results will be discussed with respect to first applications in the Umbria Region (Central Italy). Emphasis will be put on the utility of results for damage modelling, risk mitigation and emergency management.