



A holistic approach to the analysis of flood events in Mediterranean Region

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The present work has been realised in the framework of the HYMEX project, by Working Group 5, a transversal group dealing with economical, societal and ecological impacts of hydro meteorological extremes, as well as their perception and communication processes. A flood database, developed in the framework of HYMEX, and concerning four regions representative of the NW sector of Mediterranean Europe (Catalonia and Balearic Islands, in Spain; Calabria, in Italy and South-Eastern France) has been realised. The database includes floods occurred in the study areas throughout 30 years, between 1981 and 2010. Results concerning the structure of the database and its comparison to public international databases have already been published (Llasat et al, 2013).

The present paper deals with the entire database, made of 385 flood events classified as catastrophic, extraordinary and ordinary, firstly aiming to highlight similarities and differences between the ways in which they tend to manifest in the different study areas (length of the event, amount of triggering rain, occurrence of secondary damaging phenomena as landslides and erosion phenomena, amount of economic damage, involvement of people and main causes of damage affecting them, and so on). In fact, we work on four Mediterranean regions but these areas are locally characterised by different geomorphological, micro-climatic and anthropogenic contexts, leading to damage scenarios which can be different from a study area to the others.

Particularly, the present work focus on “common” events, as can be defined those events that affected more than one study area in a short while, in the way that they can be considered as the result of the same meteorological system moving from a study area to one other. The paper is an opportunity to discuss the notion of “event”. Indeed, till now, events were exclusively dealt in a regional or national frame in terms of impacts. The purpose is to get an overview of extreme events as a whole at international scale, in order to compare impacts to meteorological and hydrological data and to propose some objective criteria and indicators to help in the classification and comparison of different events.