

## **FLASH FLOOD EARLY WARNING IN NORTHERN MEDITERRANEAN COUNTRIES**

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The flash flood risk conditions in Mediterranean European countries are shortly presented, as far as time scale to the event and space correlation scales are concerned. A sample of recent events in Catalan area, south of France and northern Italy summarizes the physics and the socio-economics of the processes transforming extreme rainfalls into casualties and extensive damages to urban and industrial properties. Operational projects for early warning are currently in progress as a transnational unifying policy of the Civil Protection Agencies of the different countries. Warnings aim to allow exposed people to put timely in action precautionary measures protecting themselves from possible eventual flooding and/or diffused landsliding. Maximization of the efficiency of the decision process, in order to increase the public perception of the alert being “true” and the authority being reliable, is the key issue of such policies. The a priori estimation of the uncertainty inherent to the physical and social response modeling is needed, together with the capability of the prediction systems to gradually reduce, as long as the timeline of the event is approaching, the uncertainty bound, a posteriori, by use of observations of the precursors of the event. The role of different sources of observations is discussed, from satellite images to rain radar field measures to ground network outputs.