



Operational application of a probabilistic flood forecasting chain in the Mediterranean environment

F. Silvestro (1), N. Rebora (1), L. Ferraris (1,2)

(1) CIMA Research Foundation, CIMA Research Foundation, Savona, Italy (francesco.silvestro@cimafoundation.org, nicola.rebora@cimafoundation.org), (2) DIST, University of Genoa, Genoa, Italy

The prediction of the small-scale spatial-temporal pattern of intense rainfall events is crucial for flood risk assessment in small catchments and urban areas. In this work we present a hydrometeorological probabilistic forecast system for small and medium size basins, designed for operational applications. Following the idea presented by Siccardi et al. 2005, the probabilistic approach allows to face the problems related to the reduced dimension of the basins and to properly account for uncertainty sources in the prediction chain. Starting from Quantitative Precipitation Forecasts (QPF) issued by a regional center which is in charge of hydrometeorological predictions in Liguria Region, the system is able to issue probabilistic warnings both following a catchment-based criterion (single site) or following an area-based approach (multi-catchment).