



Meteorological characterization of events that generate floods impact in north part of Basque Country

Santiago Gaztelumendi (1,2), Joseba Egaña (1,2), and José Antonio Aranda (3)

(1) Meteorology Area, Energy and Environment Division, TECNALIA R&I, Basque Country, Spain, (2) Basque Meteorology Agency (EUSKALMET), Basque Country, Spain, (3) Emergencies and Meteorology Directorate, Security Department, Basque Government, Basque Country, Spain

In this work we analyzed the most important precipitation events during 21st century that generates floods impact in north part of Basque Country (Cantabric basin). To select the relevant events has taken into account information from damages, severe weather precipitation thresholds and other information coming from different sources including internal Euskalmet reports.

A meteorological analysis of the selected events is performed using synoptic classification, and other weather types classifications (type of precipitation, cloud systems and adverse weather categorization). Meteorological parameters were analyzed with numerical models and information from the Automatic Weather Station network and other data acquisition system available for the area (radar, Meteosat, etc..

After a thorough and detailed analysis, the main characteristics of these situations are extracted. We describe the key factors involved in a severe flood situation with high impact in the area. As a consequence severe events that promote floods in north part of Basque Country can be grouped in three main configurations.