



A case study of local floods in Añarbe area (Basque Country).

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In this study we present an analysis of a flood episode affecting Añarbe river basin on 24-27 February 2015. During those days a moderate and persistent rainfall episode affects this area of Gipuzkoa region (Basque Country), a very rainy area during cold season (October-April) where these situations occurs with some frequency.

The synoptic environment is characterized by a powerful anticyclone centered in the Atlantic, creating a north-westerly flow where it runs different active fronts. This succession of fronts generates abundant rainfall that does not have high intensities, but are persistent. The accumulated precipitation on 24-hour exceeds 120 mm in the study area, and around 300 mm for the whole event. This situation causes rivers to overflow at different points, generating floods. In addition to rain, certain contribution from melting are produced. The Urumea river overflows in different points, promoting numerous problems spatially in populated areas around Donostia. Many people need to be evacuated, and water causes considerable damages and problems all around the area including industries, shops, houses, roads, electricity distribution, etc.

In order to understand the evolution of this event, synoptic characteristics, mesoscale situation and other local meteorological characteristics are analyzed including datasets coming from the Basque Country Automatic Weather Station Mesonet network and other sources (MSG, Radar, etc) available during this episode.