

Future flash floods in the Llobregat River basin, Spain

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The Llobregat River basin in the eastern part of Catalonia (northeast of Spain) has all the specific characteristics to develop severe flash floods: Mediterranean climate, small watersheds with steep slopes and an orography that creates intense convective precipitation events. Besides, the consequences of flash floods in this area can be catastrophic due to the human developments that have been built around the rivers. There was an event in 1962, for example, with over 400 deaths.

Future flash flood magnitude and frequency in two sub basins of the Llobregat River basin have been assessed for future projections over the period 2001–2100 compared with 1971–2000. This has been done for the IPCC SRES scenarios A2 (severe) and B1 (moderate). The results of the analyses show different trends in the two sub basins: an increase of the occurrence of flash floods events in one of the sub basins, a decrease in the other.

Source: Velasco et al., 2013. Natural Hazards and Earth System Sciences 13: 3145–3156.

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