

Floods in Portugal, Spain, Italy, and Croatia - September 2022¹

Areas of Portugal, Spain, Italy and Croatia saw severe flooding as bouts of stormy weather moved across parts of Europe from mid-September 2022. As much as 420 mm of rain fell in just 3 hours in Italy's Marche Region where 11 people lost their lives in the ensuing floods.

Guarda District, Portugal 3 September 2022

The Portuguese Institute of Sea and Atmosphere (IPMA) issued warnings for severe weather from 11 September 2022 as Extratropical Cyclone Danielle made its way across the Iberian Peninsula.

Portugal Civil Protection recorded more than 350 incidents related to the bad weather from 12 to 13 September, mostly for wind damage and minor flooding in the districts of Lisbon and Setúbal.

The worst of the flooding however occurred in Manteigas municipality, Guarda District, where heavy rain fell on burn scar areas of the Serra da Estrela mountain range. The area had seen intense forest fires during the summer prompting the government to declare a state of calamity.

From late 12 September 2022 flood water, mud, downed trees and debris raced down hillsides around the village of Sameiro in Manteigas municipality, damaging buildings, infrastructure and dragging vehicles into the Zêzere river. The Mayor of Manteigas, Flávio Massano said the damage was enormous.

The Portuguese Institute of Sea and Atmosphere (IPMA) reported the city of Guarda recorded 83.7 mm of rain in 24 hours on 13 September 2022.



Figure 1: Floods and debris flows in Sameiro, Manteigas municipality, Guarda District, Portugal, 13 September 2022. Credit: Presidente da Câmara Municipal de Manteigas.

¹Source: [Floods in Portugal, Spain, Italy, and Croatia - September 2022 | Copernicus EMS - European Flood Awareness System \(efas.eu\)](https://efas.eu/)