

Editorial

Between the 10th and the 15th of September 2019, an undulation of the circumpolar current from the west on intermediate and high levels closed over itself, causing a closed upper-level low (a "cut-off low"), a high-level atmospheric depression cut off from that current in a jet stream which, on becoming positioned over the Mediterranean Sea, warm after absorbing all of the summer heat, brought about a situation of intense rainfall over the entire southeast quadrant of the Peninsula and the Balearic Islands, which was especially torrential in the provinces of Murcia and Alicante, although not only there.

This is the meteorological genesis of the rainfall, although, for the onset of a risk and for such risk to materialise as economic losses, other factors come into play. In the first place, the geographical features, which, in the areas closest to the Mediterranean, are, in general, very pronounced; this facilitates the retention of clouds, exacerbates the precipitation and makes the runoff flow more abundantly, accumulating in a short amount of time and with much kinetic energy. Secondly, these are areas of high economic interest, being particularly attractive for agriculture, industry and sectors such as tourism and real estate. This economic interest generates pressure on the territory which often locates its towns and their infrastructures in areas exposed to risk from flooding. The conjunction of the meteorological and territorial factors, including here the demographic and economic factors, turned this flood episode into the event which has generated the highest number of claims ever for this reason under the extraordinary risk insurance, approximately 67,000, becoming the second most expensive flood event to date in the history of the Consorcio de Compensación de Seguros (CCS), with a current estimate of damage of slightly over 500 million euros.

For this reason, we have devoted this issue of the Consorsegueros digital magazine to addressing this subject, that is, the cut-off lows, specifically, and flood risk, in general. The front-page topic is an article by José Antonio Fernández, Director of Production and Infrastructures in the State Weather Agency of Spain (Agencia Estatal de Meteorología or AEMET), on the meteorological causes of the cut-off lows and their possible evolution in the context of climate change. This event has also generated significant losses in the farming sector. That is why, Ignacio Machetti, Chairman of Agroseguro, signed an article including, from his perspective, the September 2019 floods, but also goes beyond this event and examines the general impact of floods on the agricultural sector and the insurance coverage of this risk. The significance of this event suggested the advisability of writing an article among several units of the CCS, putting the impact of the cut-off lows in the context of the principal flood episodes obtaining insurance compensation in Spain.



Between the 10th and the 15th of September 2019, a closed upper-level low (a "cut-off low"), a high-level atmospheric depression cut off from the jet stream circumpolar current which, on becoming positioned over the Mediterranean Sea, warm after absorbing all of the summer heat, brought about a situation of intense rainfall over the entire southeast quadrant of the Peninsula and the Balearic Islands, which was especially torrential in the provinces of Murcia and Alicante.

The conjunction of the meteorological and territorial factors, including here the demographic and economic factors, turned this flood episode into the event which has generated the highest number of claims ever for this reason under the extraordinary risk insurance, approximately 67,000, becoming the second most expensive flood event to date in the history of the Consorcio de Compensación de Seguros (CCS), with a current estimate of damage of slightly over 500 million euros.

For this reason, we have devoted this issue of the Consorsegueros digital magazine to addressing this subject, that is, the cut-off lows, specifically, and flood risk, in general.

Unfortunately, the September 2019 cut-off low caused eight fatalities; most of them were due to incidents directly or indirectly related to the use of vehicles during the flood episodes. This is not an isolated fact: a vehicle is involved in one way or another in the majority of the deaths which continue to occur in Spain during floods. For this reason, Daniel Espinosa, Juan Luis de Miguel and Carlos Arregui-Dalmases, from the Zaragoza Centre for Research on Vehicles, signed an article with very precise instructions on how to act with a vehicle in the case of flooding. The first recommendation is to avoid using it.

A study on climate change and floods, funded by the Ministry for Ecological Transition and presented in 2018, examined the probable trend in this risk in Spain by the middle of the 21st century. Gerardo Benito, a research officer in the Superior Scientific Research Council (*Consejo Superior de Investigaciones Científicas* or CSIC) and leader of this investigation, together with Javier Sánchez, Deputy Subdirector in the Directorate General for Water, signed an overview of this very interesting and relevant study. Within this context of climate change, the first National Climate Change Adaptation Plan (PNACC, for the Spanish) is about to finalise in Spain, and the second Plan is being drafted at the present time. Francisco Heras and Mónica Sánchez, from the Spanish Office for Climate Change, describe this entire process to us in another contribution, in which the Consorcio de Compensación de Seguros also participates. As is our usual practice, we have completed the issue with another summary of case law by our colleague José Antonio Badillo.