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Preliminary results of the Social Impact Research group of MEDEX: requests related to Strong Wind events (2000-2002) of two Meteorological Services

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In 2008 a pilot study was carried out by the Social Impact Research group (SIR) in two regions of Spain, the Balearic Islands and Catalonia. The SIR group, as a part of the MEDEX project, suggested some general criteria about how to analyse requested reports received in Meteorological Services, as a way to improve the knowledge of high impact weather events on population. Furthermore, an analysis of the requests related to damages caused by heavy rain (HR) events during the period 2000 and 2002 was presented. Results showed that a good indicator was obtained using the maximum of precipitation and the number of population affected by rainfall above 60 mm.

As a second part of this pilot project, this study is focused on the analysis of the requests received in the Servei Meteorològic de Catalunya as well as in the Delegación of AEMET in the Balearic Islands related to damages caused by the strong wind events (SW) included in the MEDEX database, during the period 2000 and 2002. A wind event is defined as SW when a gust wind above 25 m/s is recorded (33 m/s for elevated stations). Applying the same methodology, the temporal distribution of the requested reports has been analysed. The results obtained are in agreement with the ones presented for HR events: half of the requests were received during the first month after the event happened and during the first six month the number increase by 90%.

Also, an analysis of the SW events with higher impact on population has been done. Factors like duration of the event, maximum wind gust, simultaneity with a HR event, population density, exposure, resilience and adaptation measures, have been considered. From the results, the length of the event stands out as a relevant factor. Furthermore, the synergy with a HR event increases the magnitude of the phenomena and risk perception is higher. On the other hand, it is known that areas usually exposed to SW events are more adapted to these situations, and the number of requests reported is minor. The number of requests might give us indirect information about the vulnerability of the elements involved. So as a future work, it would be necessary to obtain and analyse this information from the received requests.