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Contribution to the elaboration of the concept of gravity index on Mediterranean area

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For many years, Predict Services has been aiming to elaborate a synthetic index that could determine the level of the impacts caused by a hydrometeorological event. This is the concept of gravity index, which is based on the aggregation of several criteria regarding: 1. The meteorological phenomenon through several parameters related to the intensity of the hazard (e.g.: rainfall accumulation or intensity; wind gusts). 2. The context of the event, such as the initial conditions of soil saturation degree, the thickness of snow coverage, or the presence of a burning area that could change the hydrological behavior of the watersheds 3. The flood stage conditions of the watercourses that could potentially overflow into the floodplain. 4. The vulnerability of all the stakes present in the flood prone area. Many calculations are performed to estimate the final cost of damages when a flood happens.
Built immediately after an event, the gravity index allows us to inform insurances companies in order to predetermine the impact of an event. Thus, helping them to mobilize experts to estimate damages and losses. The present paper aims to present the applied methodology and the results that we have obtained during the last events on Mediterranean area.