

MedCLIVAR: Mediterranean Climate Variability. Flood risk maps on the link between the precipitation data and the flood events in the Mediterranean region.

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This study analyzes the link between the flood events and the daily precipitation fields in the Mediterranean region by resulting the flood risk maps. The purpose of flood hazard and flood risk mapping is the geographical identification and illustration of areas at different level of flood risk. In the analysis we use as hazard indicator the precipitation data produced by climate simulations ensemble of the UKCP09 - UK Climate Projections database and as risk indicators the general flood, flash flood and flood data of the EM DAT-The International Disaster database. EOBS instrumental data are used to validate the RCMs (Regional Climatic Models) data in the same period analyzed for the flood events (1970-2008). The hazard maps contain information about the probability (low, medium, high) and the magnitude of the event, the flood risk maps contain additional information about the consequences by showing the distribution of flood risk indexes (killed peoples; affected peoples; damage) for each locations where the flood event occurred. By considering the flood risk as a function of precipitation hazard and their consequences, different vulnerability indices are chosen for the analysis (population density; GDP-Gross Domestic Product; Corine land cover; DEM- Digital Elevation Model and the slope of the soil), also. These parameters are aggregated into qualitative classes together the risk indices, resulting the flood danger map.