



## On the link between cyclones and floods in Italy

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This study analyzes the link between cyclones and floods in Italy from 1958 to 2000. The cyclones have a key role in determining the conditions for hazardous environmental phenomena, such as floods. This study investigates the temporal evolution of the Sea Level Pressure field and the cyclone center trajectories and characteristics (based on the ERA-40 data) in relation to intense floods in northern, central and southern Italy (based on the SICI-Sistema Informativo Sulle Catastrofi Idrogeologiche - database) and the damage caused by them in 42 years. A parallel analysis has been carried out using for the 500hPa geopotential height. Every flood event in the database has been successfully associated to a cyclone. The meridional shift of the trajectories and the differences in the area of the cyclogenesis with the location of the flood are investigated.