

Synoptic Analysis of a Heavy Flood in the Province of Sistan-Va-Balouchestan: Iran January 2020

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Abstract : In this research, the synoptic weather conditions during the heavy flood of 10-12 January 2020 in the Sistan-va-Balouchestan Province of Iran will be analyzed. To this aim, reanalysis data from the National Centers for Environmental Prediction (NCEP) and National Center for Atmospheric Research (NCAR), NCEP Global Forecasting System (GFS) analysis data, measured data from a surface station together with satellite images from the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) have been used from 9 to 12 January 2020. Atmospheric parameters both at the lower troposphere and also at the upper part of that have been used, including absolute vorticity, wind velocity, temperature, geopotential height, relative humidity, and precipitation. Results indicated that both lower-level and upper-level currents were strong. In addition, the transport of a large amount of humidity from the Oman Sea and the Red Sea to the south and southeast of Iran (Sistan-va-Balouchestan Province) led to the vast and unexpected precipitation and then a heavy flood.

Keywords : Sistan-va-Balouchestan Province, heavy flood, synoptic, analysis data

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