



## **Influence of North Sea – Caspian pattern on the hydroclimate of Turkey.**

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The North Sea - Caspian upper air teleconnection pattern (NCP) has important implications on the regional climate of Eastern Mediterranean. NCP dominantly determines the direction of meridional flow over Turkey, thus significantly affects the hydroclimate of the country. Connections between monthly indices of NCP and precipitation/streamflow time series of Turkey were investigated by means of Pearson's correlation coefficient. Canonical correlation analysis was used to extract the modes of NCP from large scale 500 hPa geopotential height fields, which are associated with Turkey's precipitation/streamflow anomalies. Results reveal that NCP affects Turkey's precipitation regime much more than it does the streamflow, and this effect is pronounced on wintertime. In December and January, precipitation and streamflows in western parts of the country are highly but negatively correlated with NCP's positive phase. Precipitation series of Black Sea shoreline is generally positively correlated with NCP(+) throughout the year, except in January. Thrace rainfall shows the highest negative correlations with NCP(+). February is the only month in winter in which all correlations with NCP(+) shift to positive (but do not necessarily become positive). These results, can not only serve as a good data set for downscaling purposes, but also put forward interesting questions about the rainfall variability of Eastern Mediterranean.