



Daily Precipitation Concentration across Europe during 1971-2010

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Daily Precipitation Concentration Index (CI) was used in this paper to investigate the statistical structure of daily precipitation across Europe based on 744 daily rainfall series for the period 1971–2010. Annual CI shows a global crosswise gradient, from North-West to South-East of Europe (excluding Turkey and Greece). The same gradient is also observed in winter, spring and autumn, while in summer the gradient is North-South. Highest annual and seasonal daily concentration of rainfall were detected primarily to the western Mediterranean basin, along Spanish and French coastlands. Relief seems to be one of the most noticeable factor in the spatial distribution of CI.

Mann–Kendall test identifies no global significant temporal trend patterns across Europe for 1971-2010 period. French is the only country with increasing annual and seasonal CI values. These results suggest that no significant changes have occurred in daily precipitation distribution across Europe during 1971-2010.