



Impacts of the North Atlantic Oscillation on Frequencies of Daily Precipitation Extremes over the UK in winter

Xiao-Feng Li, Hayley Fowler, and Stephen Blenkinsop

School of Civil Engineering and Geosciences, Newcastle University, Newcastle upon Tyne, Britain

As the UK is located downstream of the westerly jets associated with the North Atlantic Oscillation (NAO) in winter, the NAO has a strong influence on wintertime precipitation. Previous studies have demonstrated that the NAO significantly impacts daily precipitation extremes over the UK. Here, we report that the influence of the NAO on the frequency of daily extremes is dependent on the percentile used to define the extreme event. The influence of the NAO on the frequency of moderate daily precipitation extremes is stronger than the influence on the frequency of heavy precipitation extremes. This finding provides further acknowledge of the influence of large-scale circulation on precipitation extremes.