

Interactive comment on “The response of Iberian rivers to the North Atlantic Oscillation” by J. Lorenzo-Lacruz et al.

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In this study the authors aimed to analyse the influence of the North Atlantic Oscillation (NAO) on the streamflow in 187 sub-basins of the Iberian Peninsula (IP). Their specific purposes include different aspects of the NAO influences in a diagnostic sense. I found their methodological applications at a satisfactory level in order to reach their proposed purposes. What they did mainly are (i) to assess the spatio-temporal extent of the NAO influence on Iberian river discharges, they conducted monthly and one-month lagged correlations; (ii) to assess potential changes in the temporal evolution

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of the NAO influence, they conducted moving-window correlation analyses; and (iii) to summarize the spatio-temporal variability of the streamflow anomalies detected during the positive and negative NAO phases, they applied the principal component analysis (PCA).

The text and the methodology are properly explained and figures (overall) are easy to understand. The work may be regarded as continuation of the good job that the authors have been done in the past, with numerous and valuable papers on this field of research.

Overall, I recommend accepting the paper after the following few comments.

(i) In section 3.2, they applied the Wilcoxon-Mann Whitney test to the two NAO extreme cases. Prior to application of this test there are some assumptions to be checked, such as all the observations from both groups are independent of each other. There is no explanation in the text for this.

(ii) In section 5.2, I found their explanations for spatial and temporal variability in IP very logical, but once they mentioned reservoir impacts, I wonder if they observed homogeneity conditions in the selected rivers.

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