

Supporting Information for "Increased winter-mean wave height, variability and periodicity in the North-East Atlantic over 1949-2017"

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Additional Supporting Information (Files uploaded separately)

1. Caption for Dataset S1

Introduction This supporting information provides the winter-mean of significant wave height H_s , North Atlantic Oscillation (NAO) and the West Europe Pressure Anomaly (WEPA) indices, with winter defined as the period from December to March (DJFM). The 1949-2017 winter-mean H_s is based on a wave model hindcast performed from January

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1948 to April 2017 on a 0.5° resolution grid covering the whole North Atlantic. The 10-m wind fields \vec{u}_{10} of the NCEP/NCAR reanalysis project [Kalnay et al., 1996] were used to force the spectral wave model Wave Watch III V14.18 [Tolman, 2014]. The winter WEPA was computed as the DJFM sea level pressure (SLP) difference anomaly between the stations Valentia (Ireland) and Santa Cruz de Tenerife (Canary Islands). The SLP difference was further normalized over the same 69 winters. To be consistent with the WEPA time series, the DJFM SLP difference between the stations Reykjavik (Iceland) and Lisbon (Portugal), reflecting the variability between the Azores high and the Icelandic low [Hurrell, 1995, see Fig. ??a], was used to compute the DJFM NAO index.

Data Set S1. Time series of winter (DJFM) mean WEPA, NAO and H_s used for the whole analysis

References

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