



## Supplement of

## The Euro-Mediterranean Center on Climate Change (CMCC) decadal prediction system

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## **Supplementary Figures:**



**Fig S1**: MSLP ACC for lead years 1-9. Stippling denotes points where 95% statistical significance is not reached, according to a one-tailed t test. The actual number of degrees of freedom has been computed following Bretherton et al., 1999. Green lines represent the longitudinal domain considered for the NAO index computation.



**Fig S2:** Detrended near-surface temperature ACC for lead year 4-10. Stippling denotes points where 95% statistical significance is not reached, according to a one-tailed t test. The actual number of degrees of freedom has been computed following Bretherton et al., 1999.



**Fig S3:** Mean annual AMOC cell for lead year 1 (a), lead year 1-5 (b) and lead year 6-10 (c). We consider all the start dates (1960-2020).



**Fig S4:** Monthly time series for maximum AMOC at 26.5°N from RAPID array (in black) and DPS (colored lines).



**Fig S5:** Annual time series for maximum AMOC at 26.5°N from RAPID array (in black) and DPS (colored lines) and its intra-ensemble spread (colored envelopes) for for lead year 1 (a), lead year 1-5 (b) and lead year 6-10 (c). The black dashed line represents monthly observed RAPID values while the black solid line is the 12-month (60-month) running mean for lead year 1 (lead year 1-5 and lead year 6-10) for a consistent comparison between the timeseries.



**Fig S6:** Ocean Heat Content integrated over 300-meter depth mean squared skill score (MSSS) of the hindcasts using NoInit runs as the reference forecast to beat. Note that the colorbar is not symmetric around zero. Stippling is used to indicate points where 95% statistical significance is not reached, according to a one-tailed t test. The actual number of degrees of freedom has been computed following Bretherton et al., 1999.



**Figure S7:** Relative Operating Characteristic (ROC) for near-surface temperatures (SST/TAS) for lead years 1, 1–5 and 6–10, considering three tercile categories: lower tercile (left column), middle tercile (central column) and upper tercile (right column).