



Figure S1. Skill of the selected modes of ocean variability: a-c) ENSO, d-f) IPO, g-i) AMV and j-l) SPNA-OHC300. The indices have been computed for the common period for all forecast ranges (i.e. 1970-2018). The first column shows the observed (grey bars) and predicted (PRED in blue, HIST in red) time series of the indices. The ensemble means are represented with lines and the ensemble spread with coloured envelopes. The first column shows the ENSO index for the first winter (DJF), while for the other indices the average of the first 4 forecast years is shown. The second column shows the ACC of PRED (blue) and HIST (red), the MSSS of PRED considering HIST the baseline prediction (black dashed line) and a persistence forecast (purple). Statistically significant ACC values (at the 95% confidence level) are shown as empty circles. ACC differences that are statistically significant (at the 95% confidence level) between the PRED and HIST are shown as filled circles. The third column shows the spread-error-ratio of PRED (blue) and HIST (red).