Supplement of

Improving statistical projections of ocean dynamic sea-level change using pattern recognition techniques

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**Figure S1**: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 2 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.

**Figure S2**: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 3 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.
Figure S3: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 4 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.

Figure S4: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 5 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.
Figure S5: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 6 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.

Figure S6: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 7 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.
Figure S7: Time evolution in terms of standard deviations (a, c, and e, respectively) and associated S/N M EOF pattern number 8 for RCP 2.6, 4.5, and 8.5 (b, d, and f respectively). Light coloured lines in a, c, and d represent standard deviation anomalies from ensemble members, whereas dark coloured lines depict ensemble mean evolution of the pattern.
Figure S8. Slope difference between unfiltered and filtered DSL obtained from pattern scaling using GMTSRL as predictor for RCP 2.6 (a), RCP 4.5 (b), RCP and 8.5.

Figure S9. Enlargement of figure S8a to show locations for figures S10-14, which are shown as green dots.
Figure S10. Linear regression of DSL against GMTSLR in grid point 1 (see Fig. S8) for (a) unfiltered data, (b) 30-year moving mean, and (c) LFCA-filtered data.

Figure S11. Linear regression of DSL against GMTSLR in grid point 2 (see Fig. S8) for (a) unfiltered data, (b) 30-year moving mean, and (c) LFCA-filtered data.
Figure S12. Linear regression of DSL against GMTSLR in grid point 3 (see Fig. S8) for (a) unfiltered data, (b) 30-year moving mean, and (c) LFCA-filtered data.

Figure S13. Linear regression of DSL against GMTSLR in grid point 4 (see Fig. S8) for (a) unfiltered data, (b) 30-year moving mean, and (c) LFCA-filtered data.

Figure S14. Linear regression of DSL against GMTSLR in grid point 5 (see Fig. S8) for (a) unfiltered data, (b) 30-year moving mean, and (c) LFCA-filtered data.