



Supplement of

Non-stationary GEV models for estimating design sea-states in a changing climate – applications to offshore wind farms along the French coasts

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S1 Monthly quantiles at SRPs

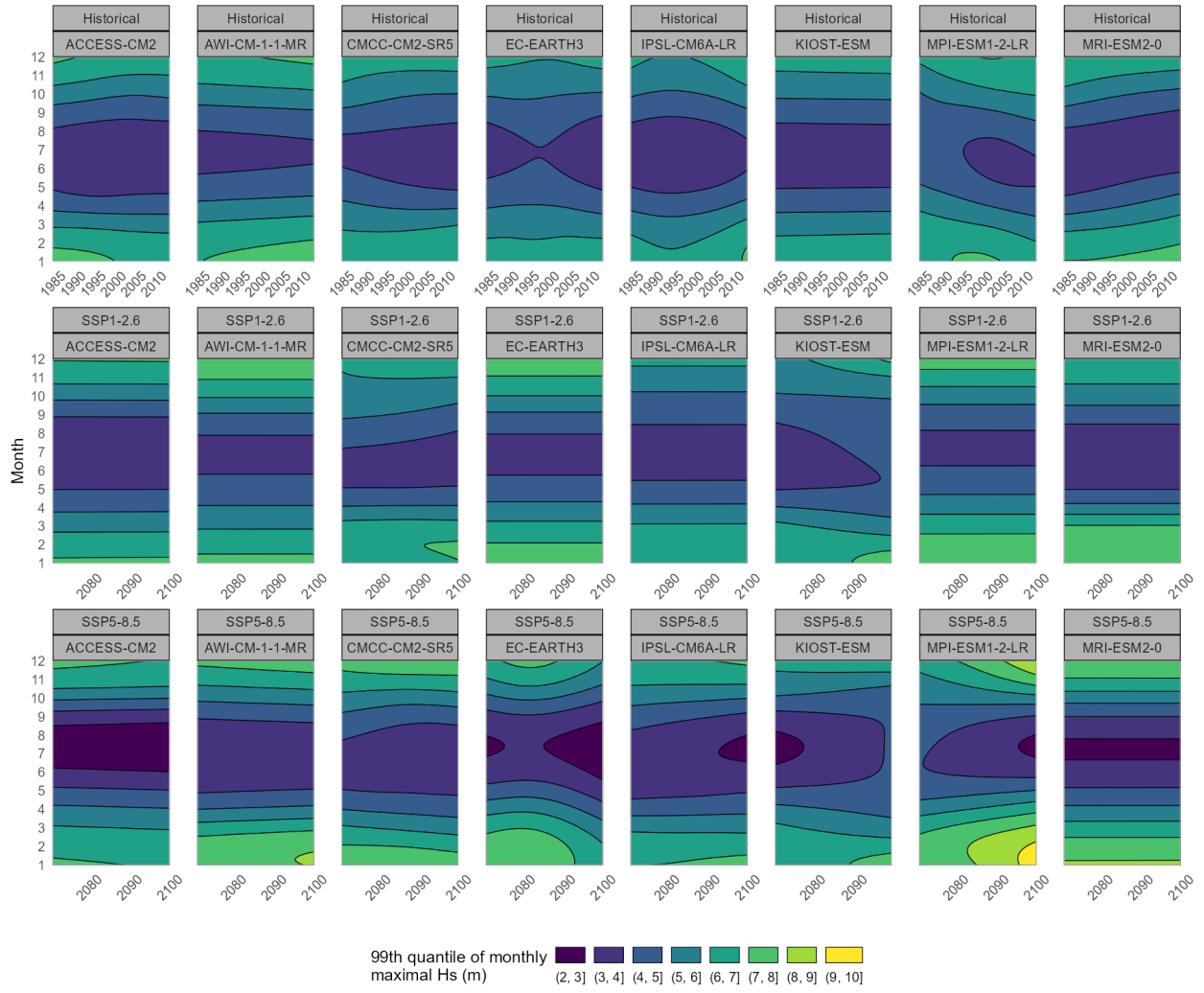


Figure S1: Comparison of monthly 99th quantile, at the West English Channel Representative point

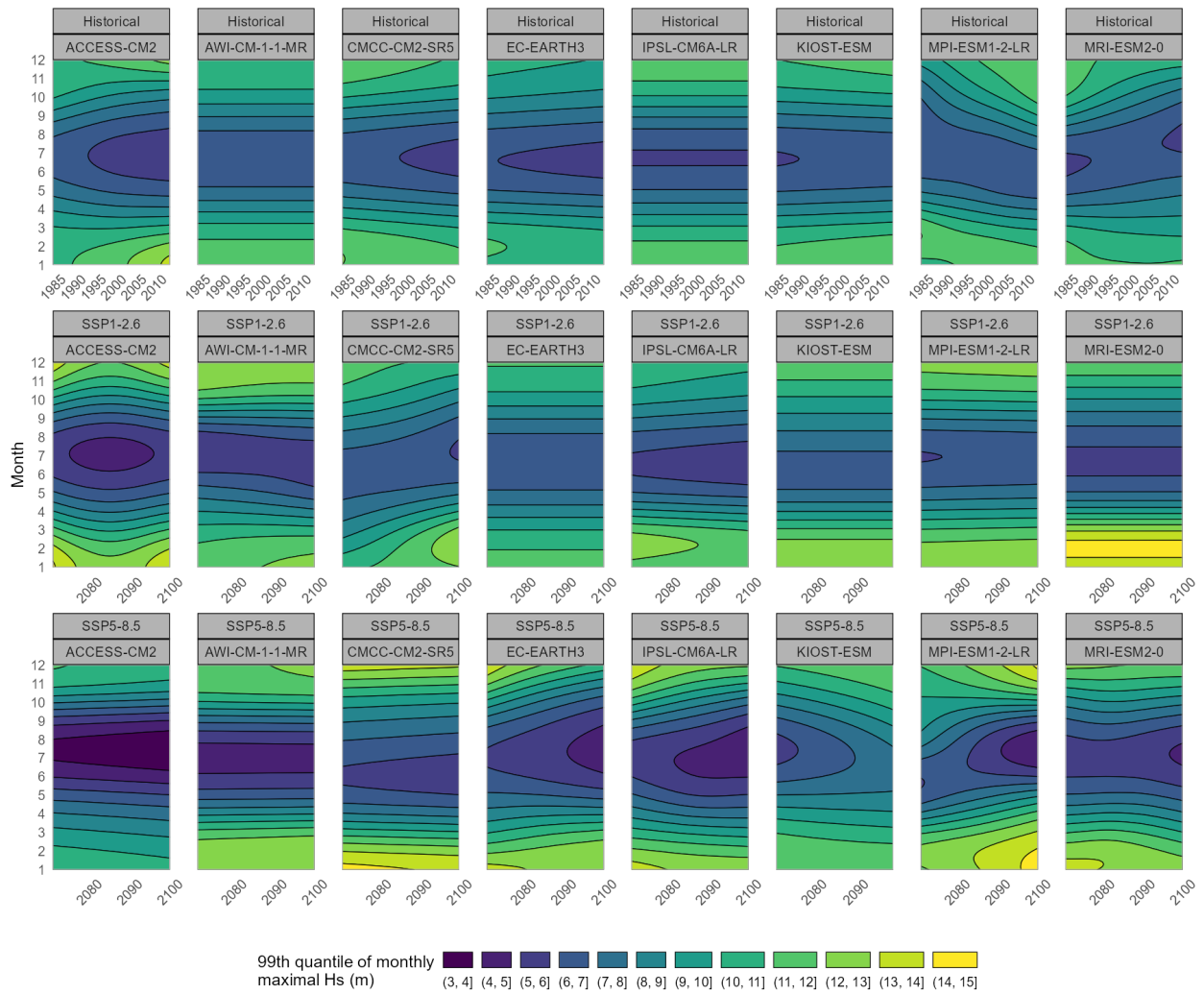


Figure S2: Comparison of monthly 99th quantile, at the North Atlantic Representative point

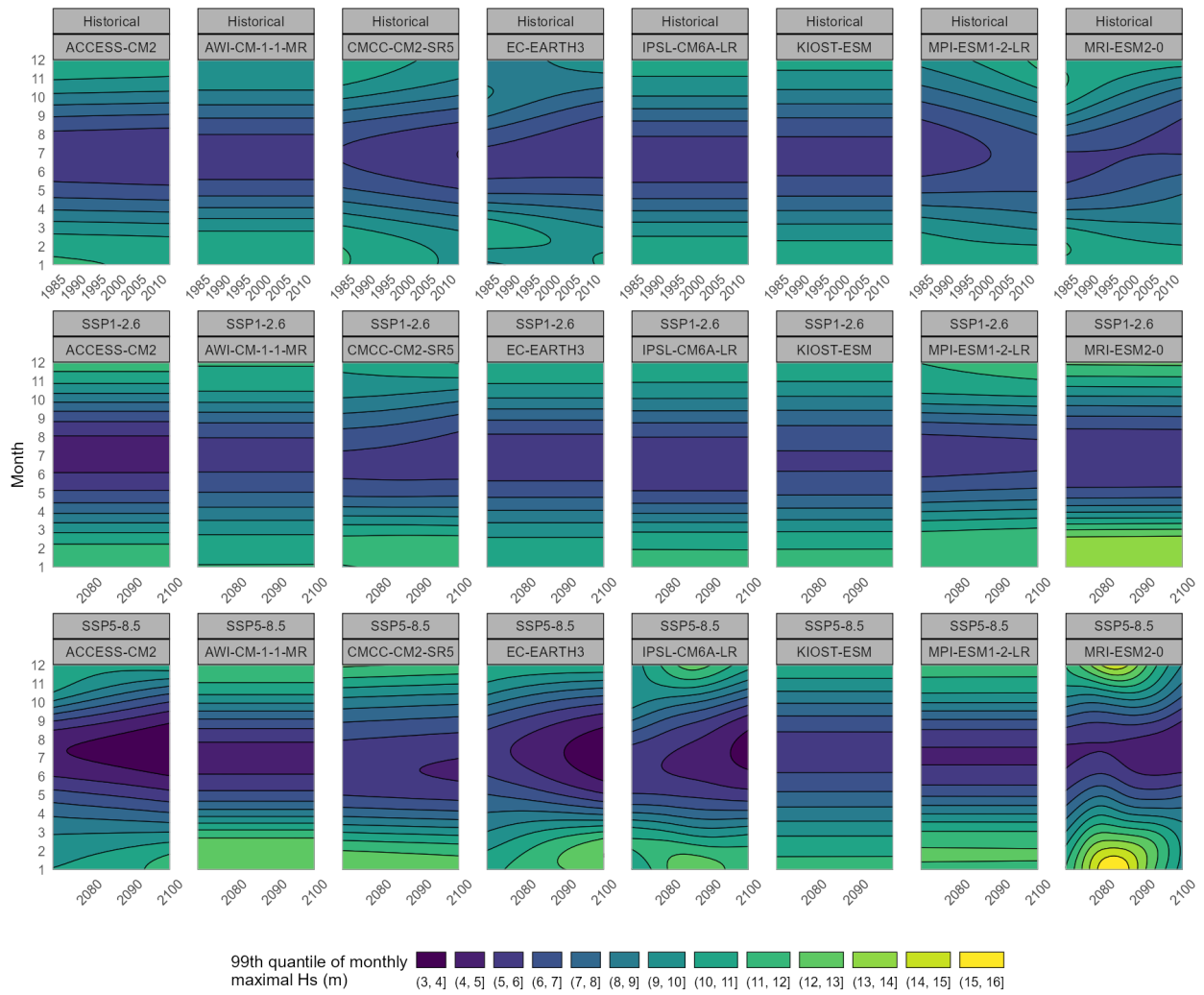


Figure S3: Comparison of monthly 99th quantile, at the South Atlantic Representative point

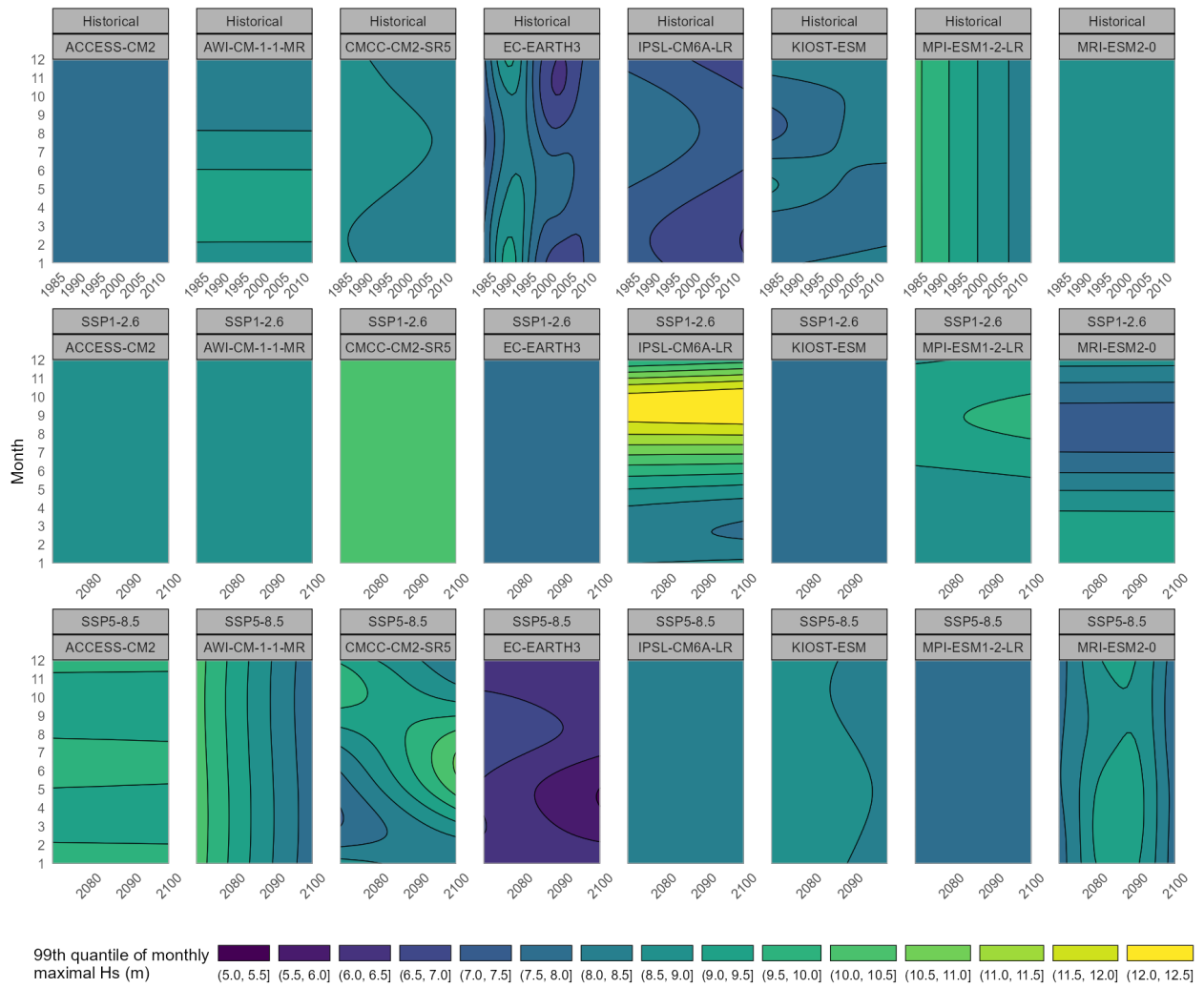


Figure S4: Comparison of monthly 99th quantile, at the West Mediterranean Representative point

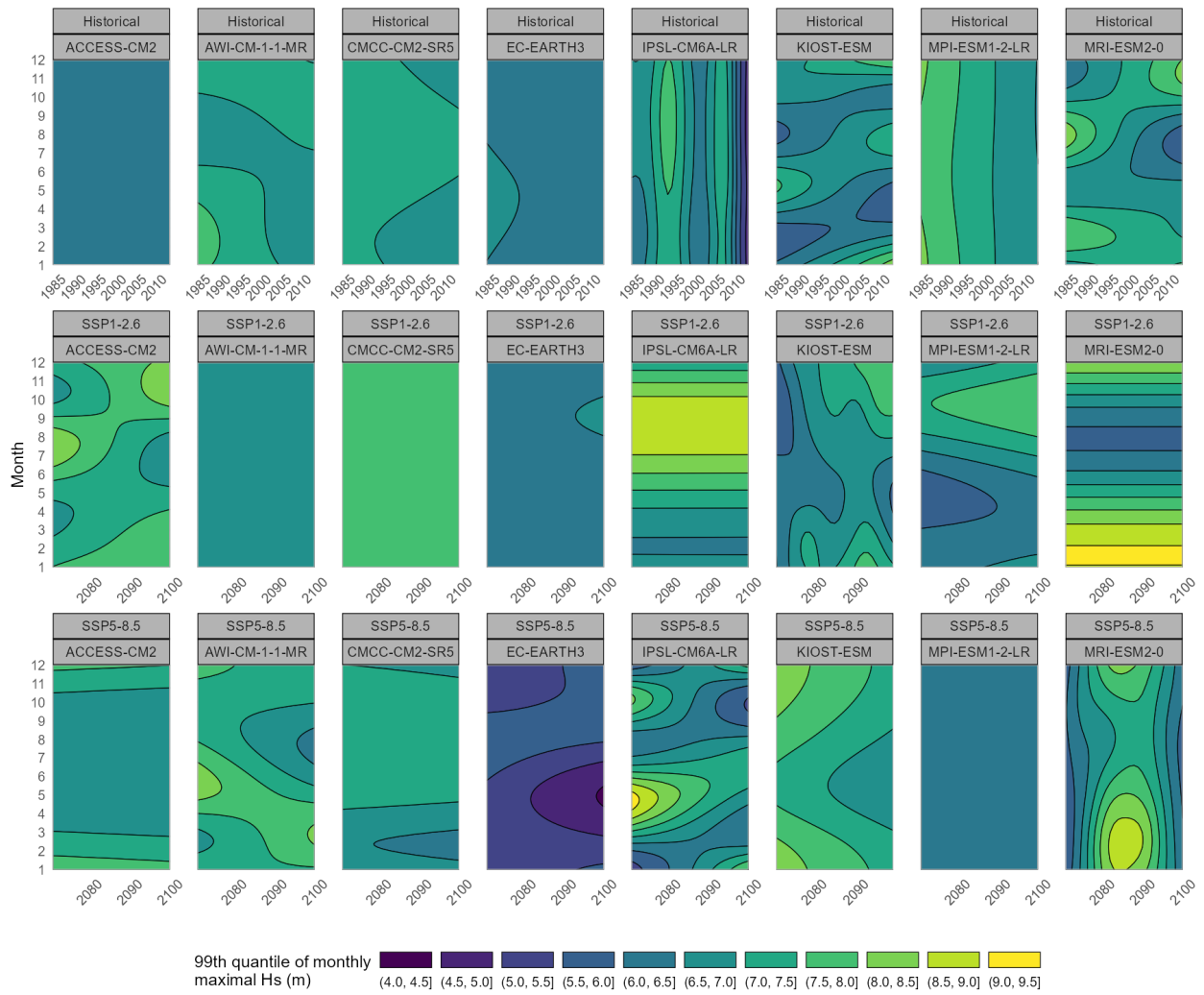


Figure S5: Comparison of monthly 99th quantile, at the East Mediterranean Representative point

S2 Comparison of monthly quantiles at SRPs for given years

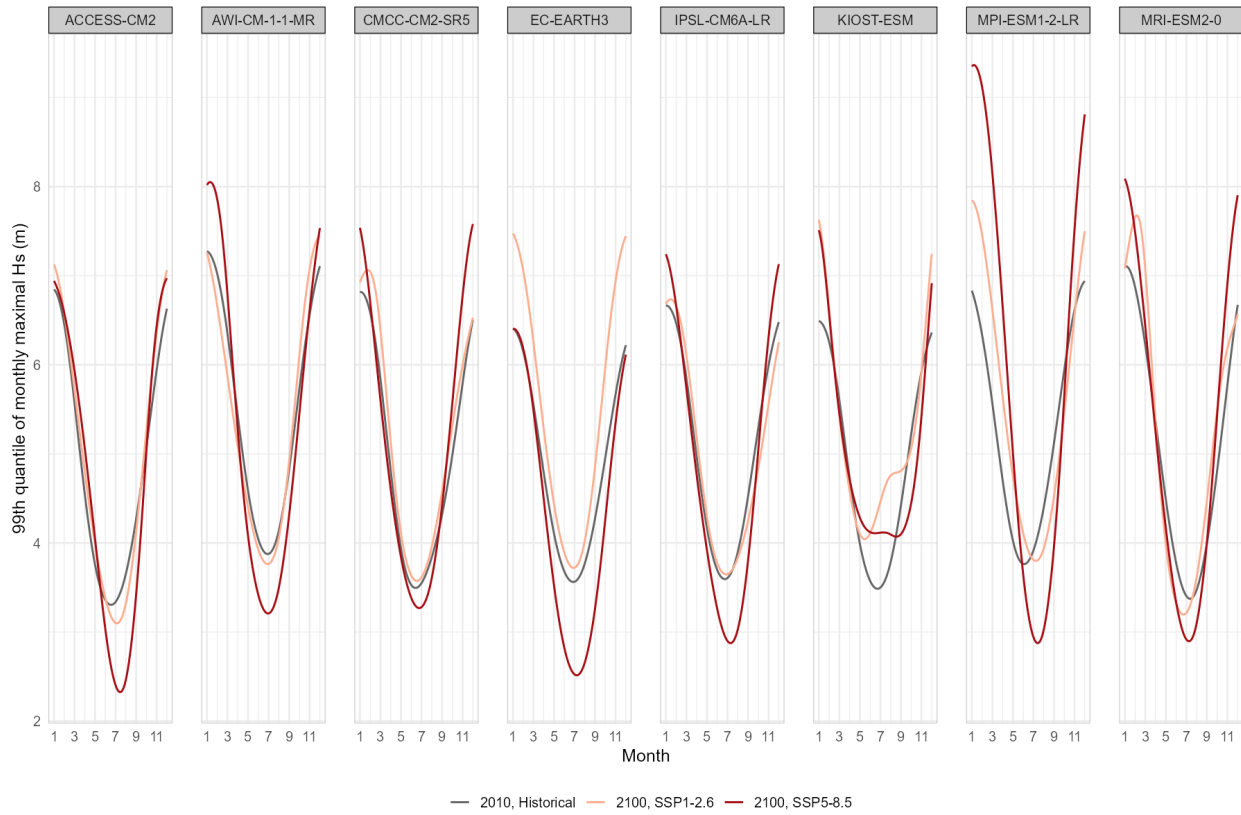


Figure S6: Comparison of monthly 99th quantile, at the West English Channel Representative point, at given years (2010 for Historical run, 2100 for Scenarios SP1-2.6 and SSP5-8.5)

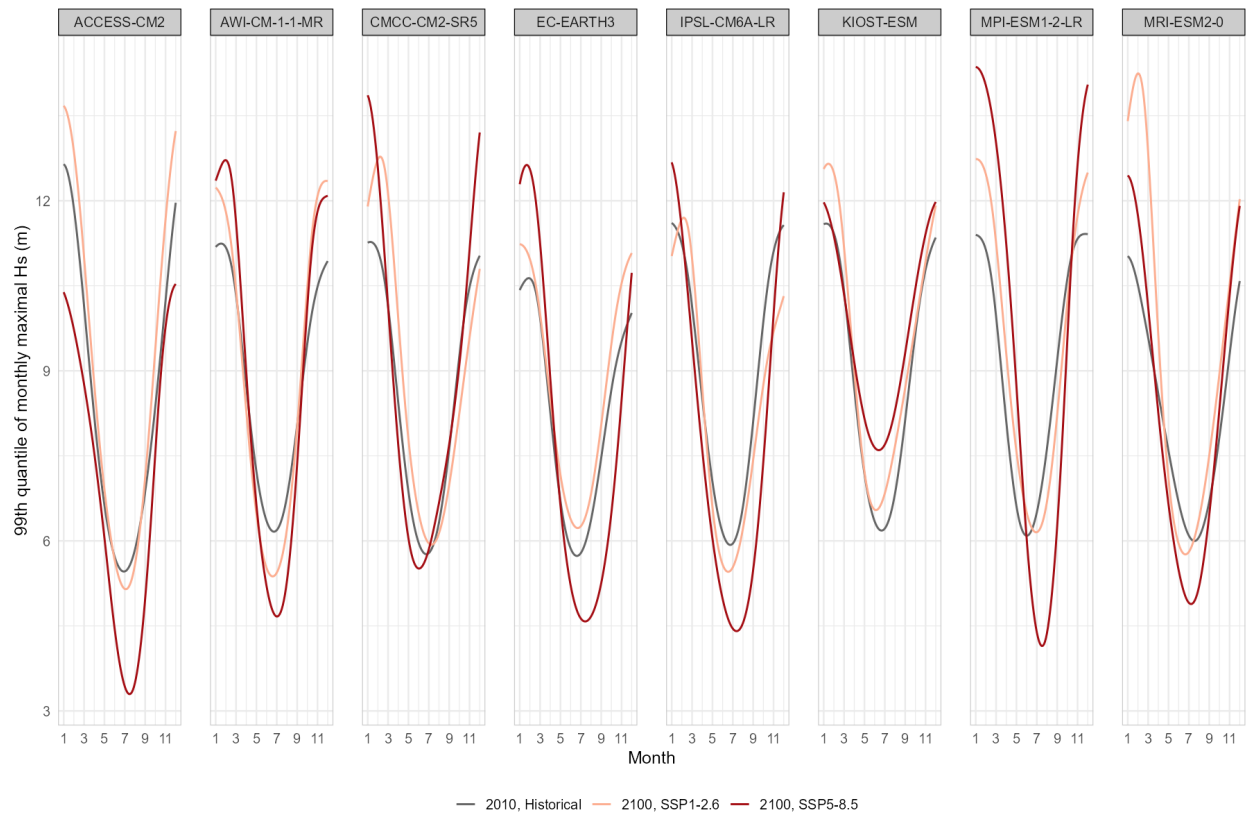


Figure S7: Comparison of monthly 99th quantile, at the North Atlantic Representative point, at given years (2010 for Historical run, 2100 for Scenarios SP1-2.6 and SSP5-8.5)

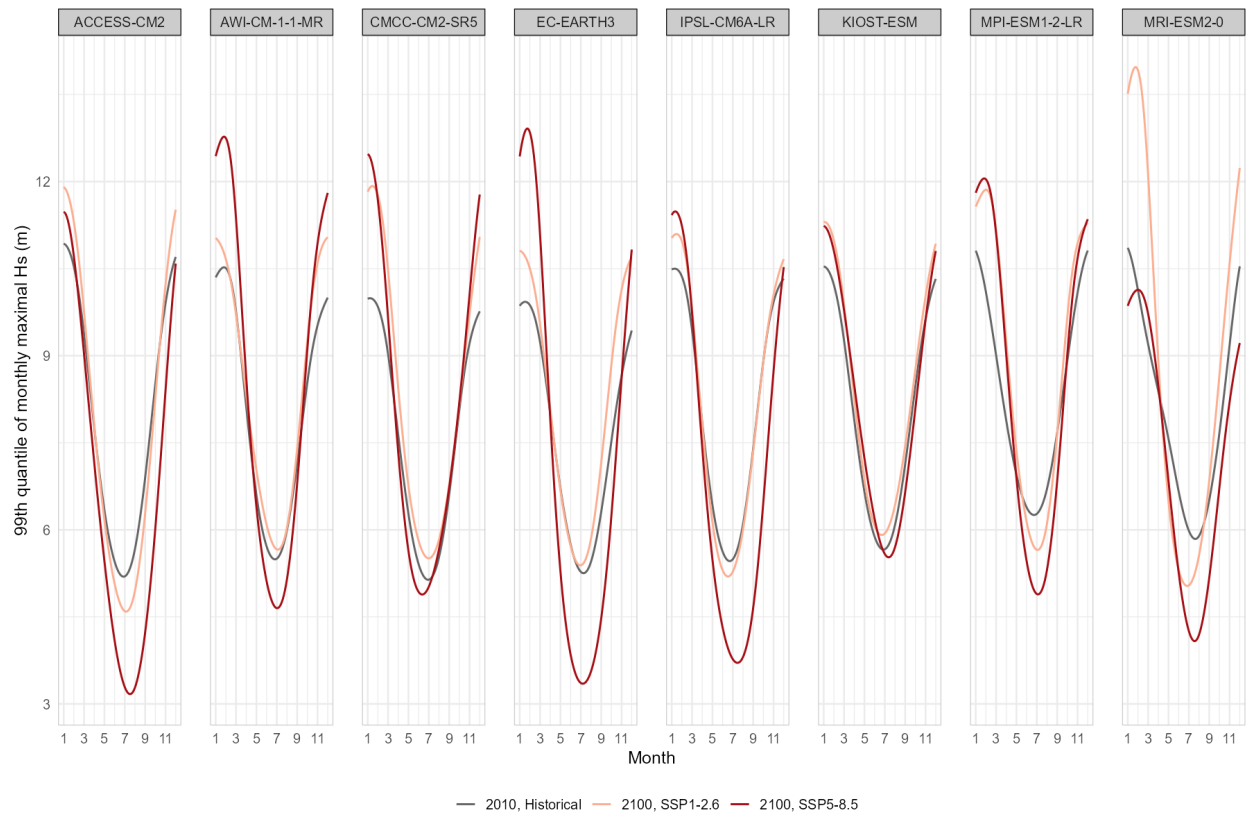


Figure S8: Comparison of monthly 99th quantile, at the South Atlantic Representative point, at given years (2010 for Historical run, 2100 for Scenarios SP1-2.6 and SSP5-8.5)

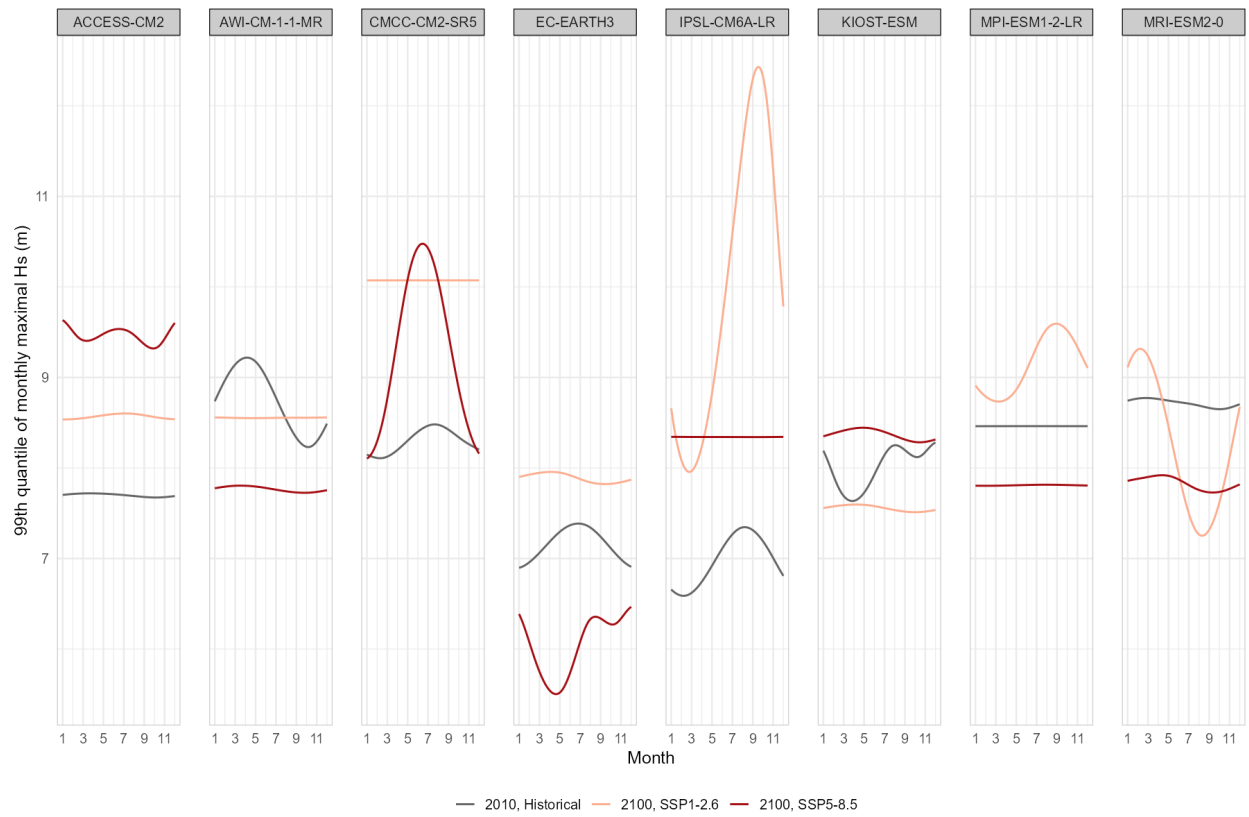


Figure S9: Comparison of monthly 99th quantile, at the West Mediterranean Representative point, at given years (2010 for Historical run, 2100 for Scenarios SP1-2.6 and SSP5-8.5)

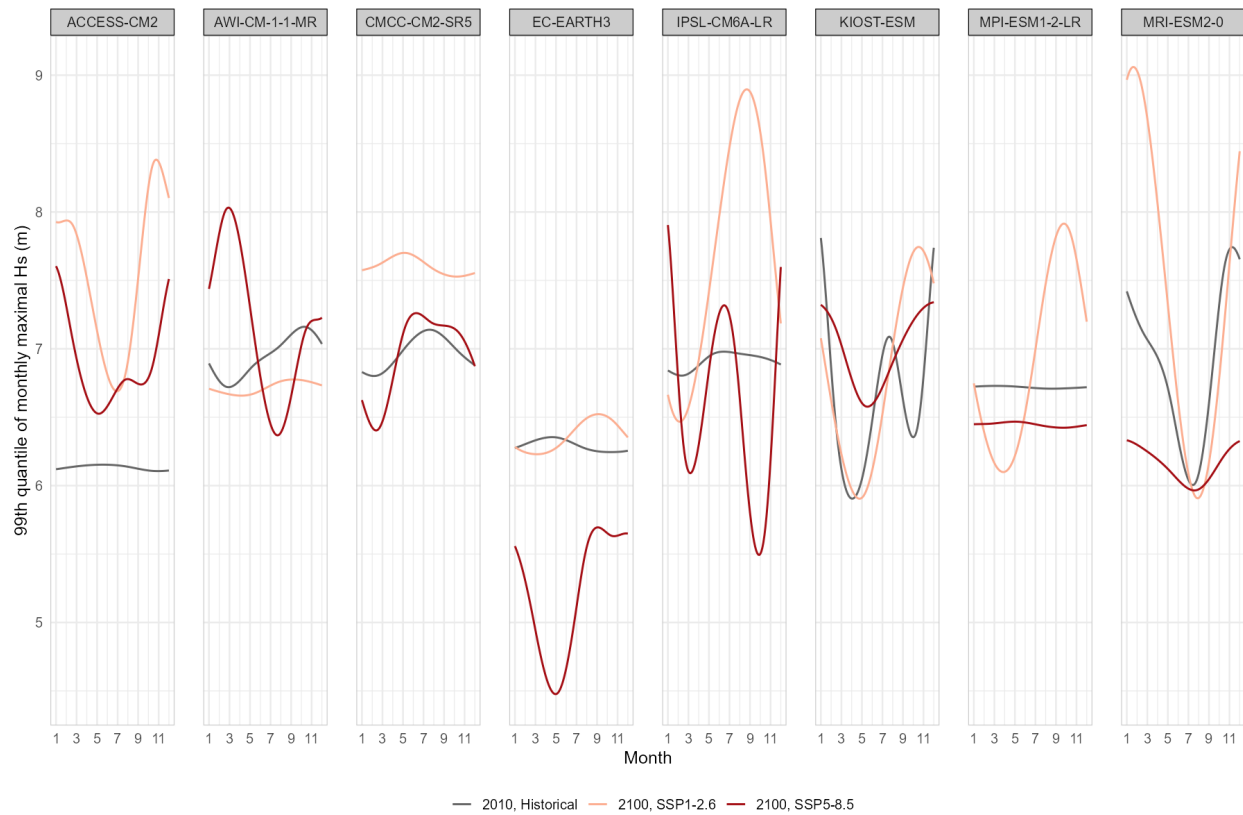


Figure S10: Comparison of monthly 99th quantile, at the East Mediterranean Representative point, at given years (2010 for Historical run, 2100 for Scenarios SP1-2.6 and SSP5-8.5)

S3 Yearly return levels at the different SRPs

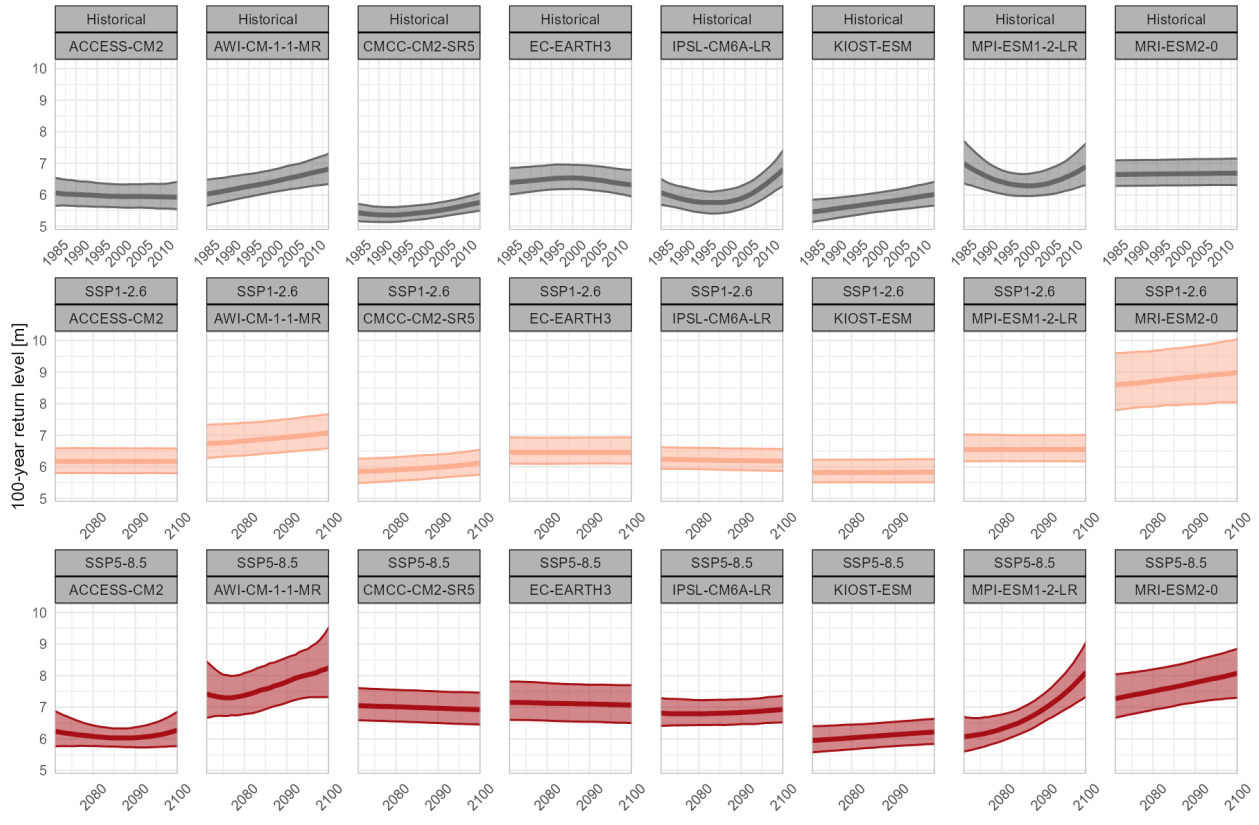


Figure S11: Comparison of yearly return levels, at the East English Channel Representative point

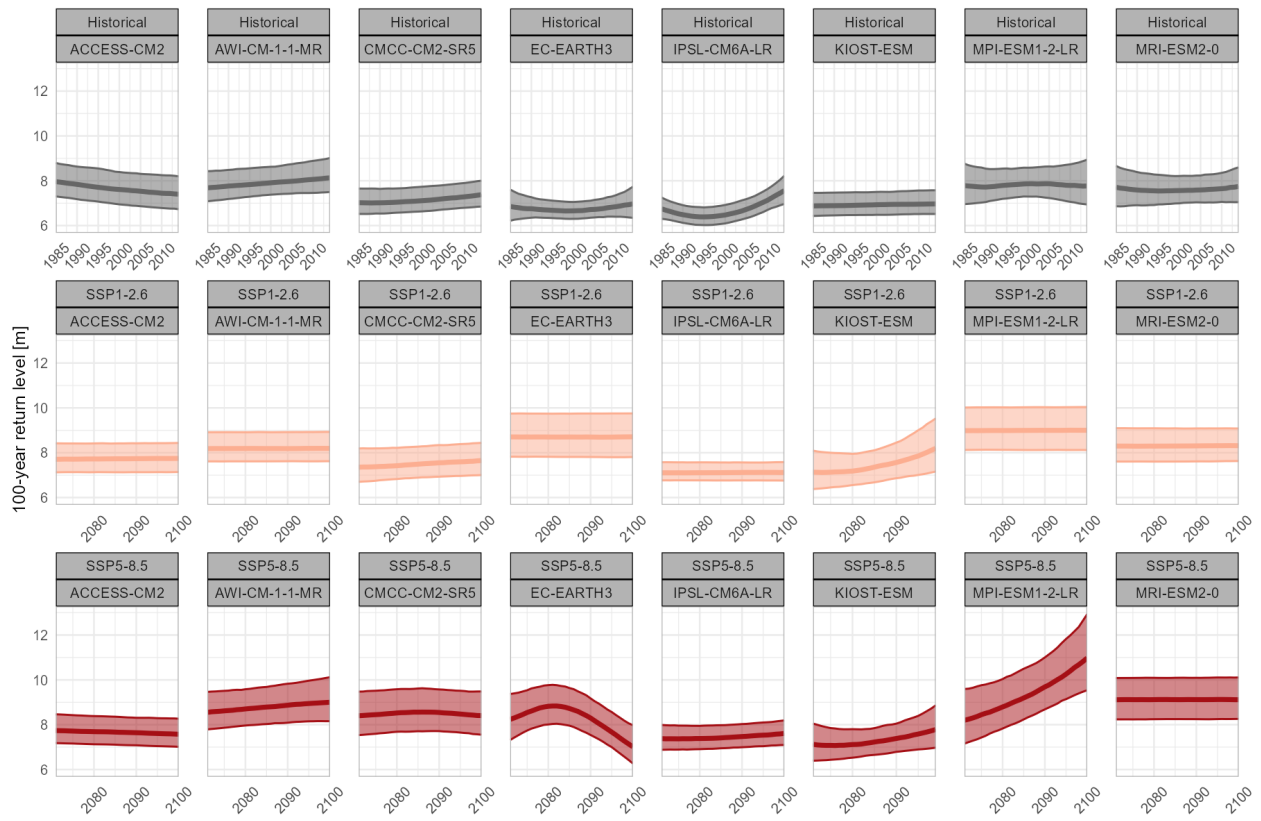


Figure S12: Comparison of yearly return levels, at the West English Channel Representative point

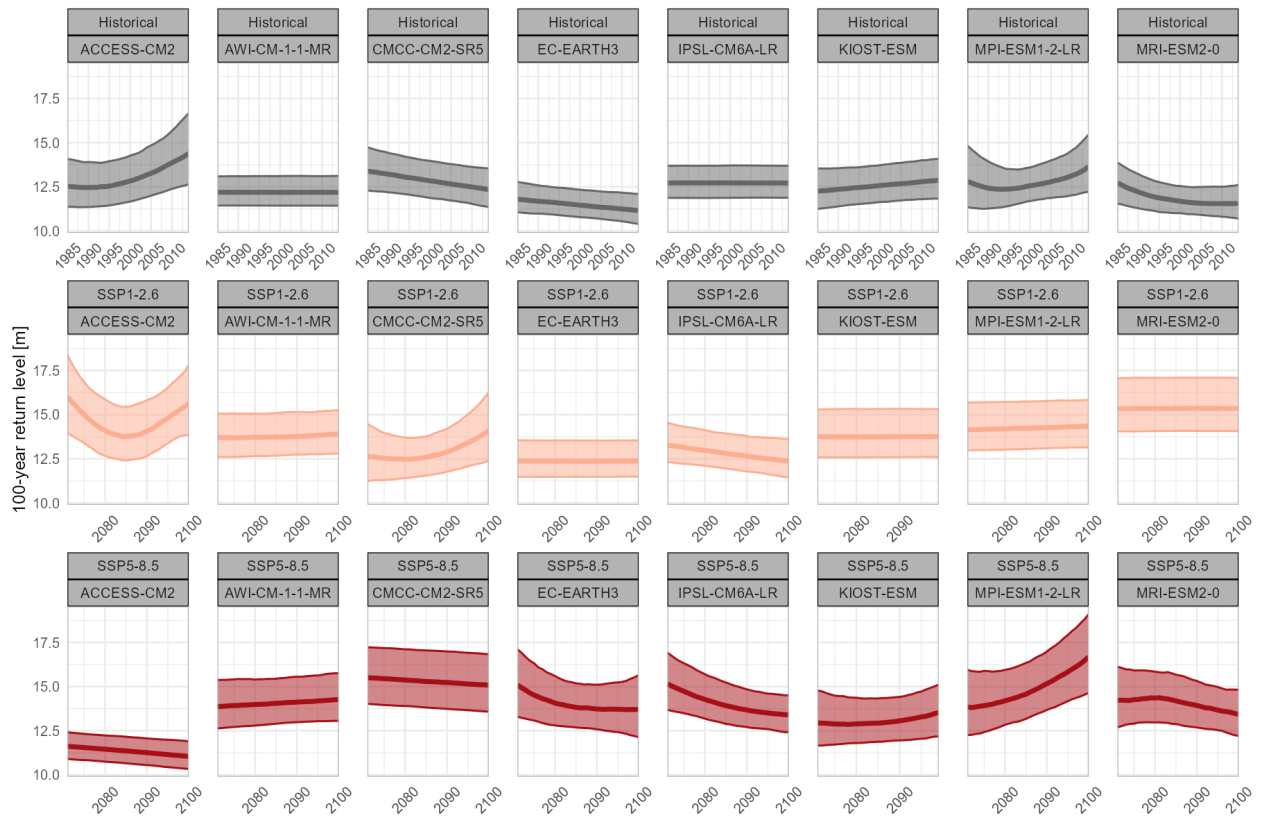


Figure S13: Comparison of yearly return levels, at the North Atlantic Representative point

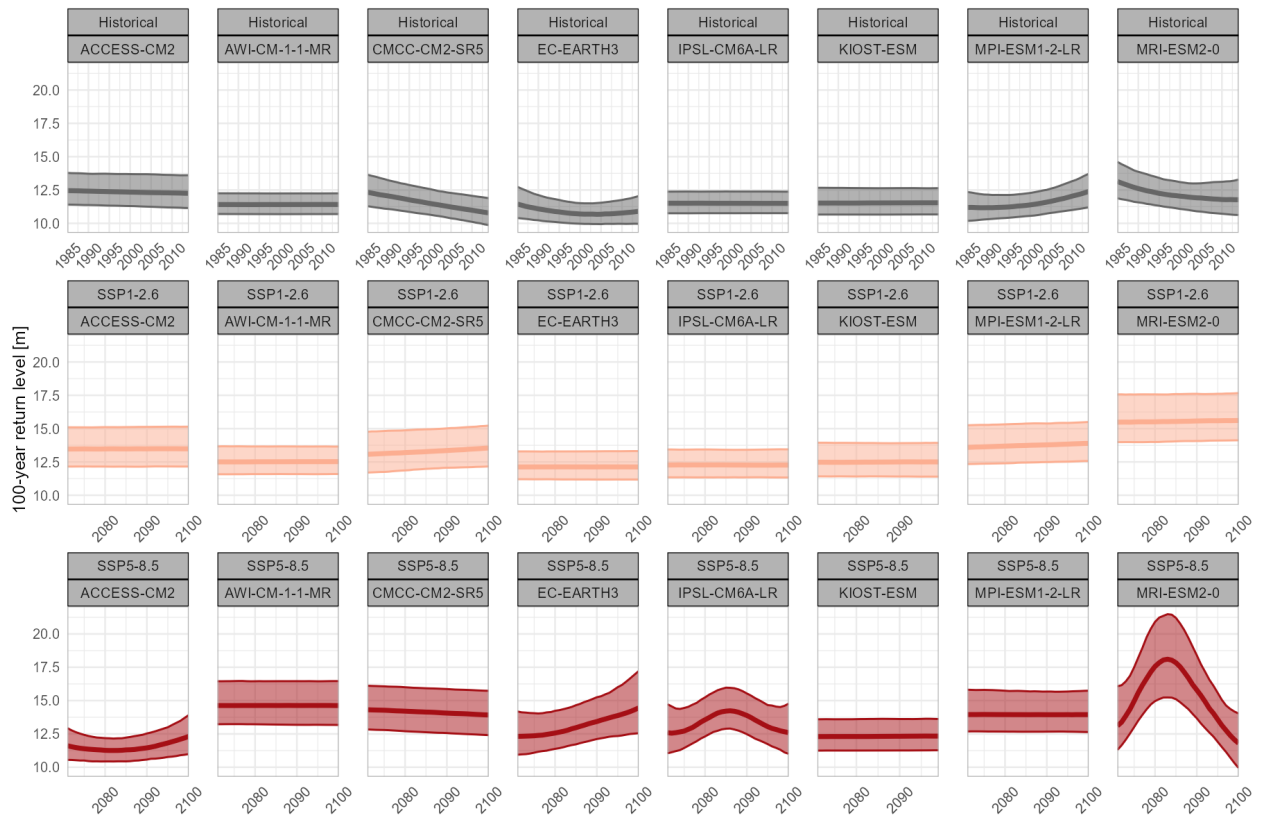


Figure S14: Comparison of yearly return levels, at the South Atlantic Representative point

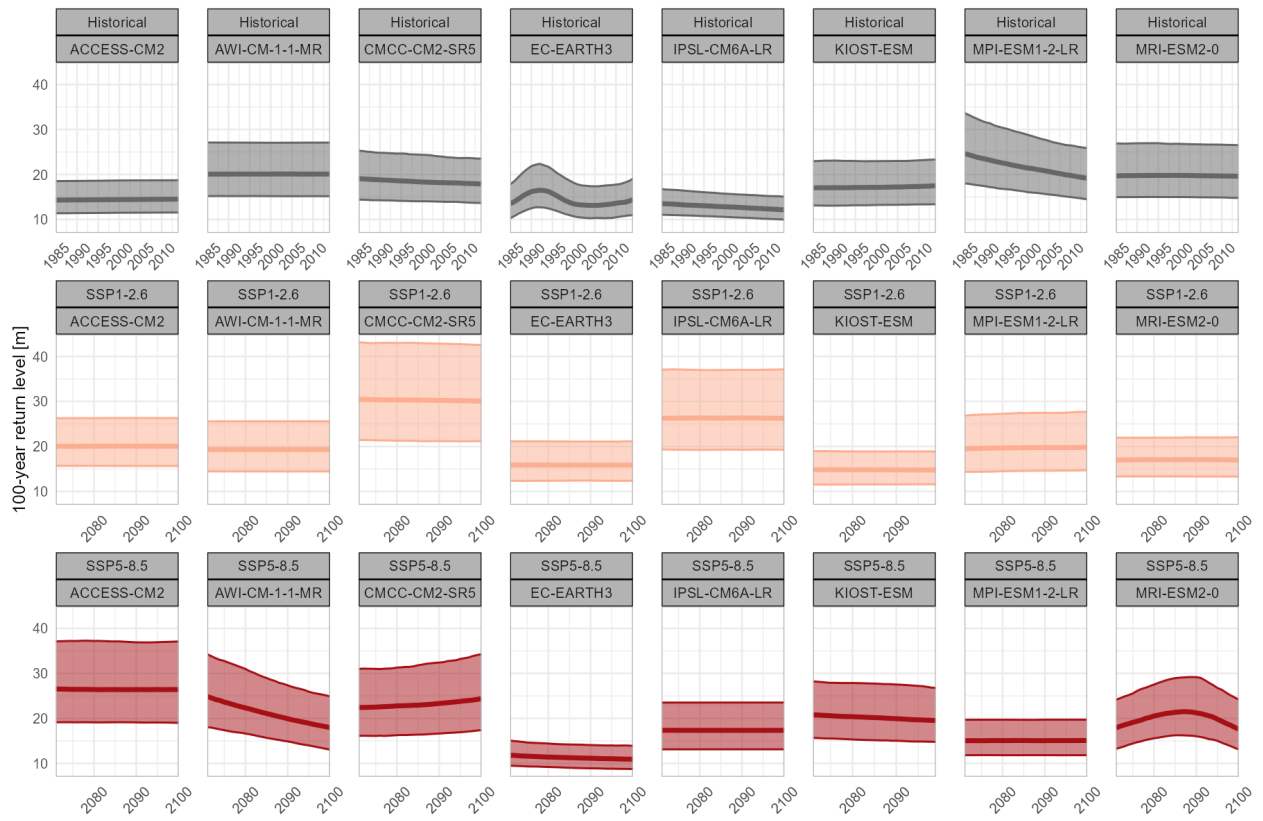


Figure S15: Comparison of yearly return levels, at the West Mediterranean Representative point

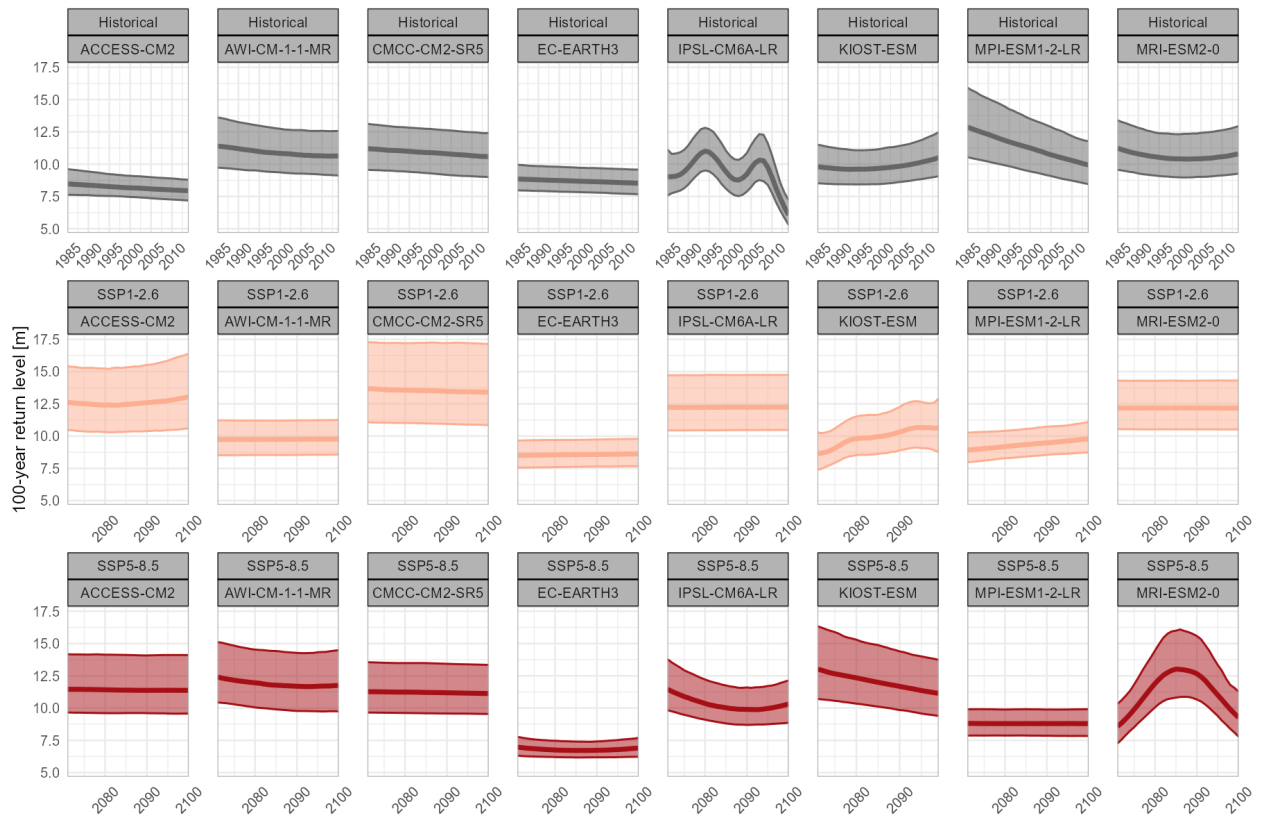


Figure S16: Comparison of yearly return levels, at the East Mediterranean Representative point

S4 Lifetime design level for each SRPs

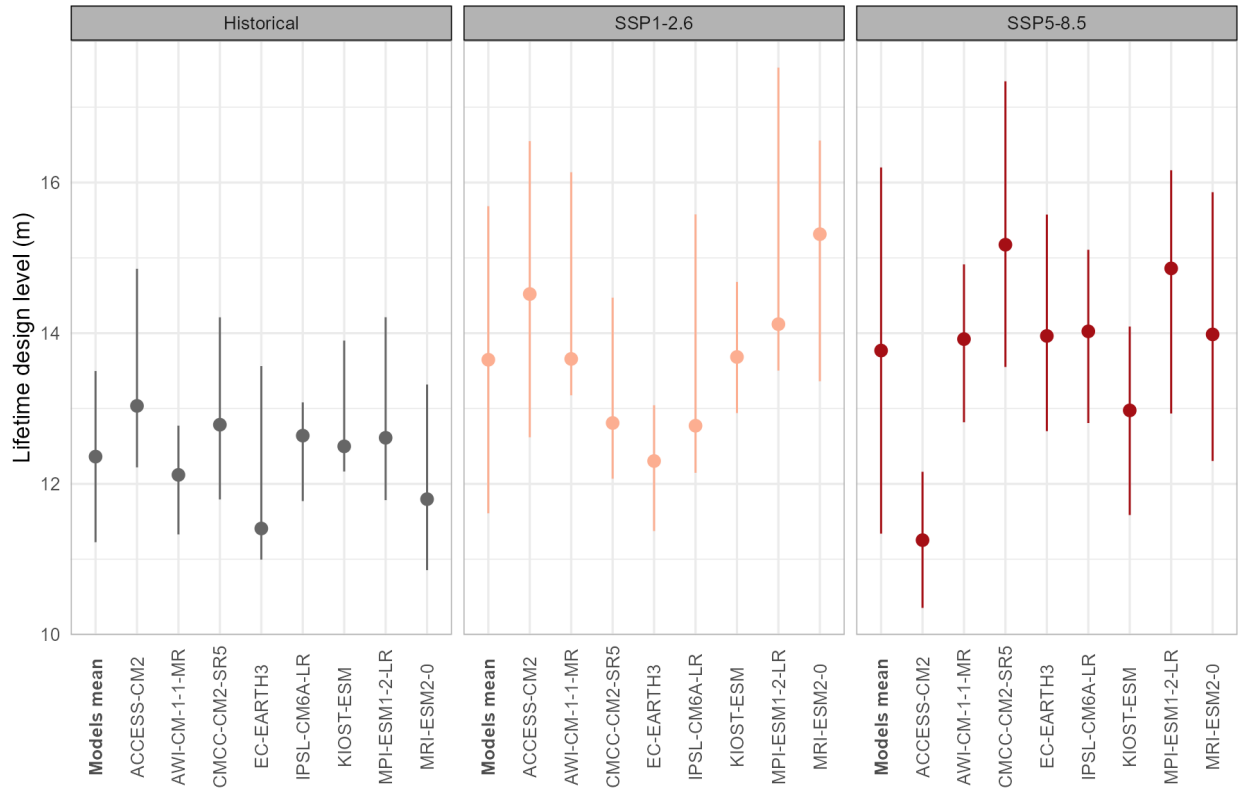


Figure S17: Comparison of yearly return levels, at the North Atlantic Representative point

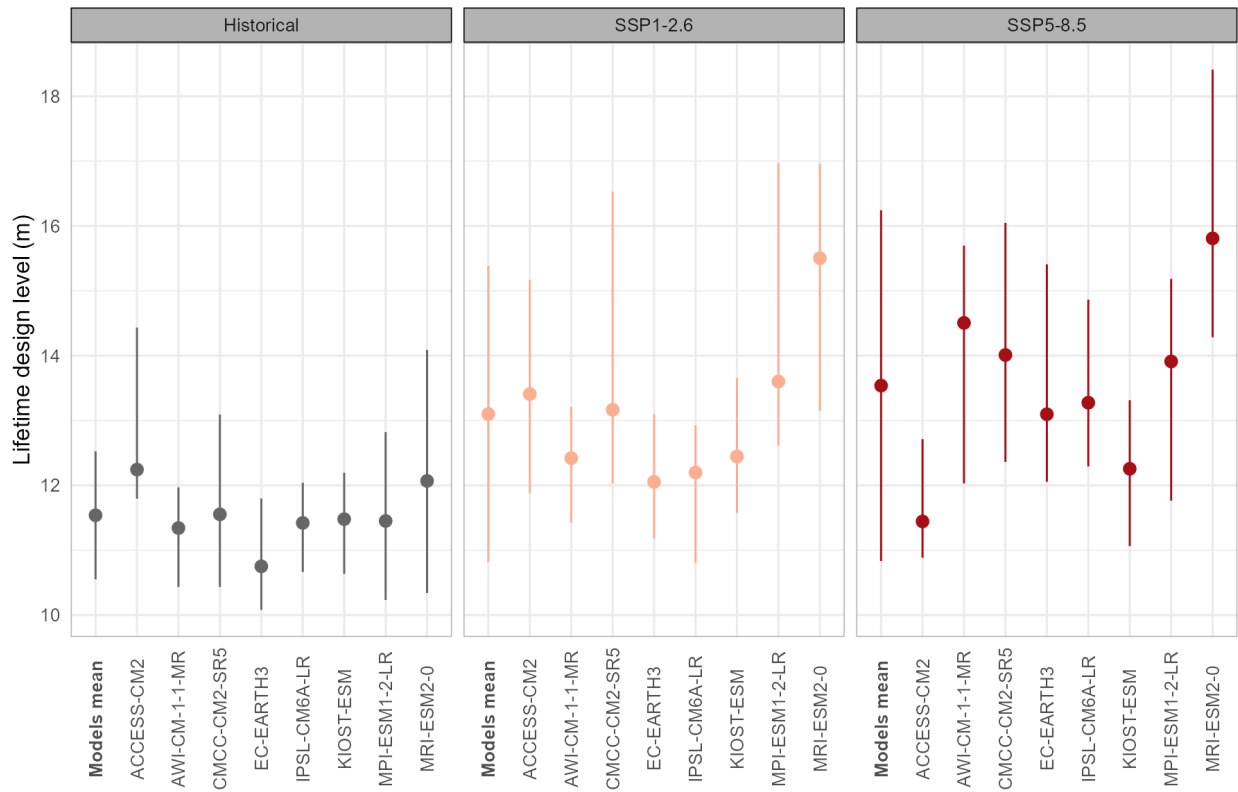


Figure S18: Comparison of yearly return levels, at the South Atlantic Representative point

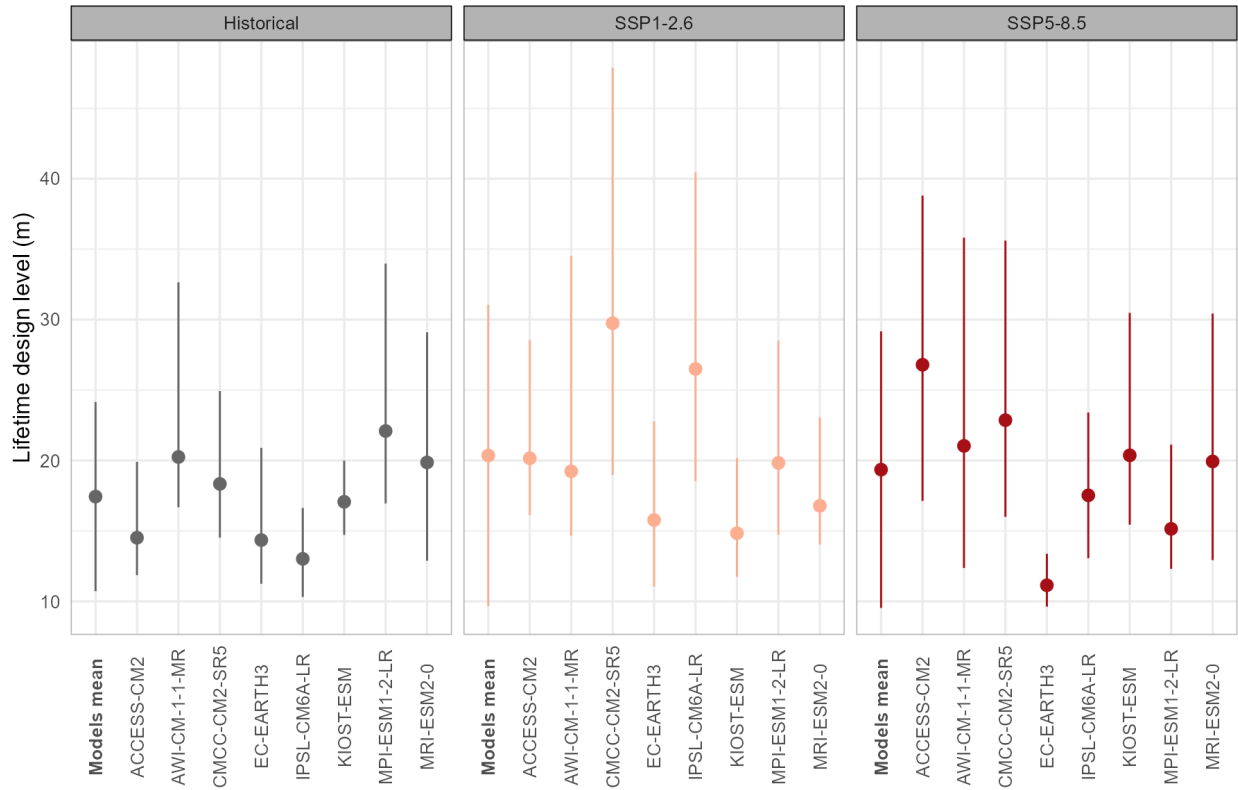


Figure S19: Comparison of yearly return levels, at the West Mediterranean Representative point

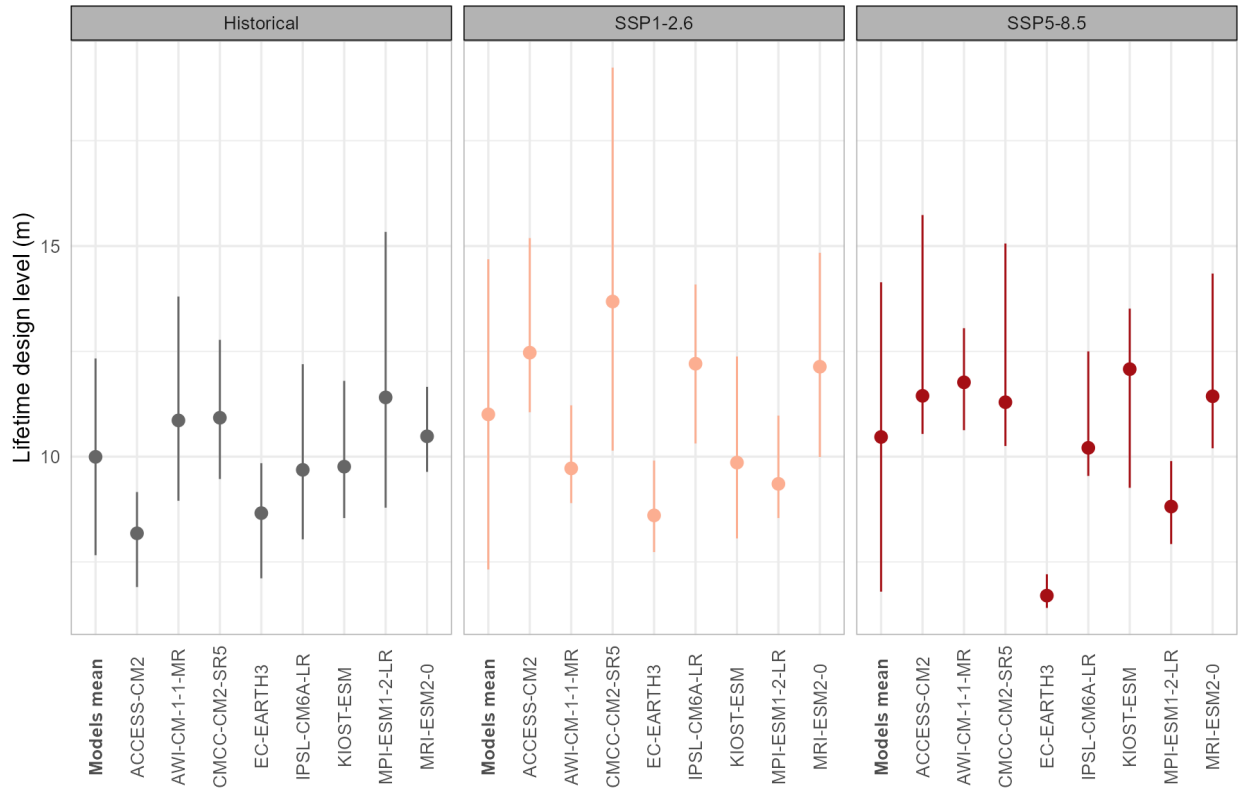


Figure S20: Comparison of yearly return levels, at the East Mediterranean Representative point