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Compensatory effects conceal large uncertainties in the modelled processes behind the relationship between the El Niño–Southern Oscillation (ENSO) and CO_2

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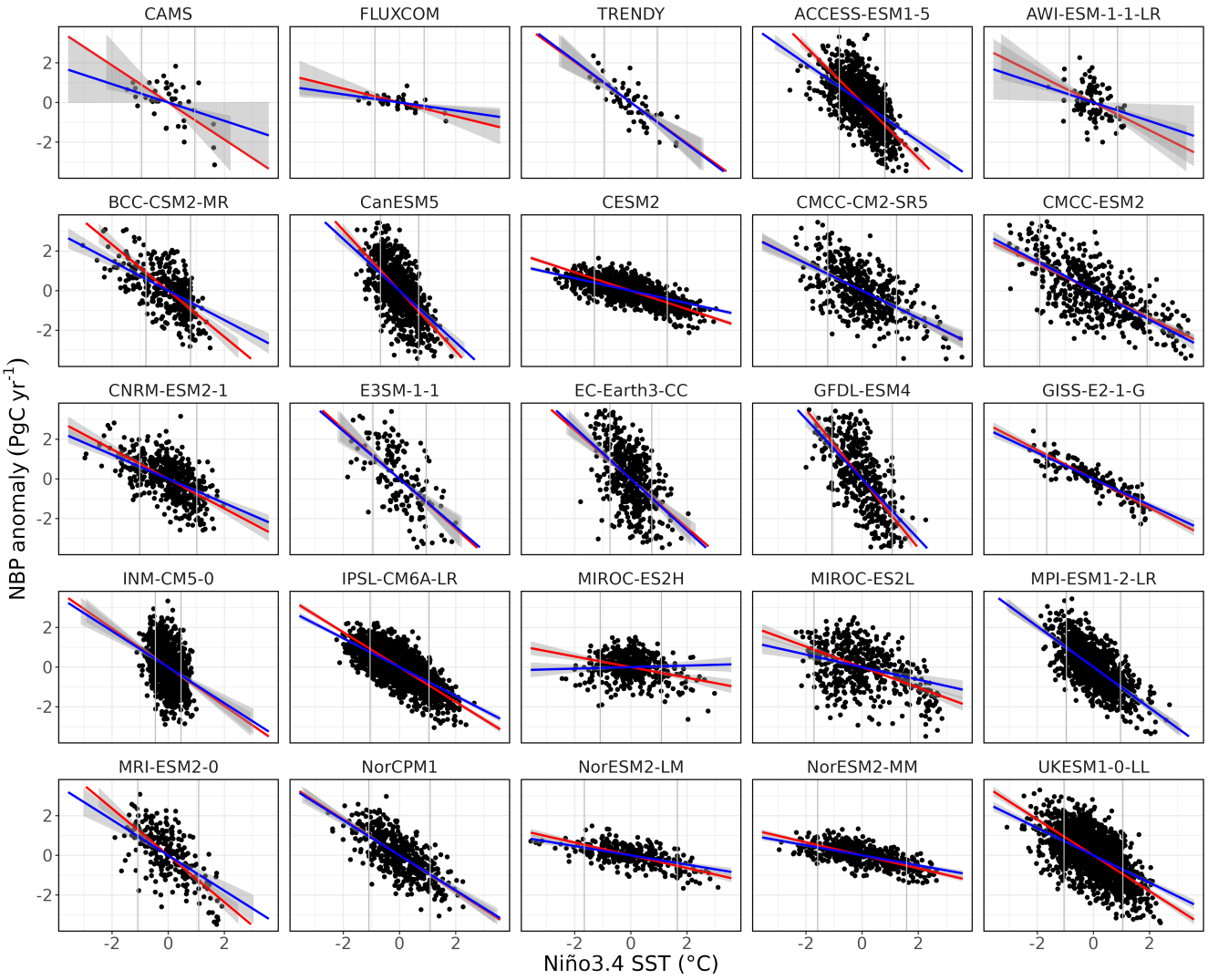

Figure S1: Global annual NBP anomalies against Niño3.4 SSTA in observational and ESM data. The red regression lines are fitted to SSTA values > 0 and the blue lines to values < 0, the grey area represents the 95% confidence interval of the regression lines. The grey vertical lines are the 10th and 90th percentile of ENSO SSTAs.

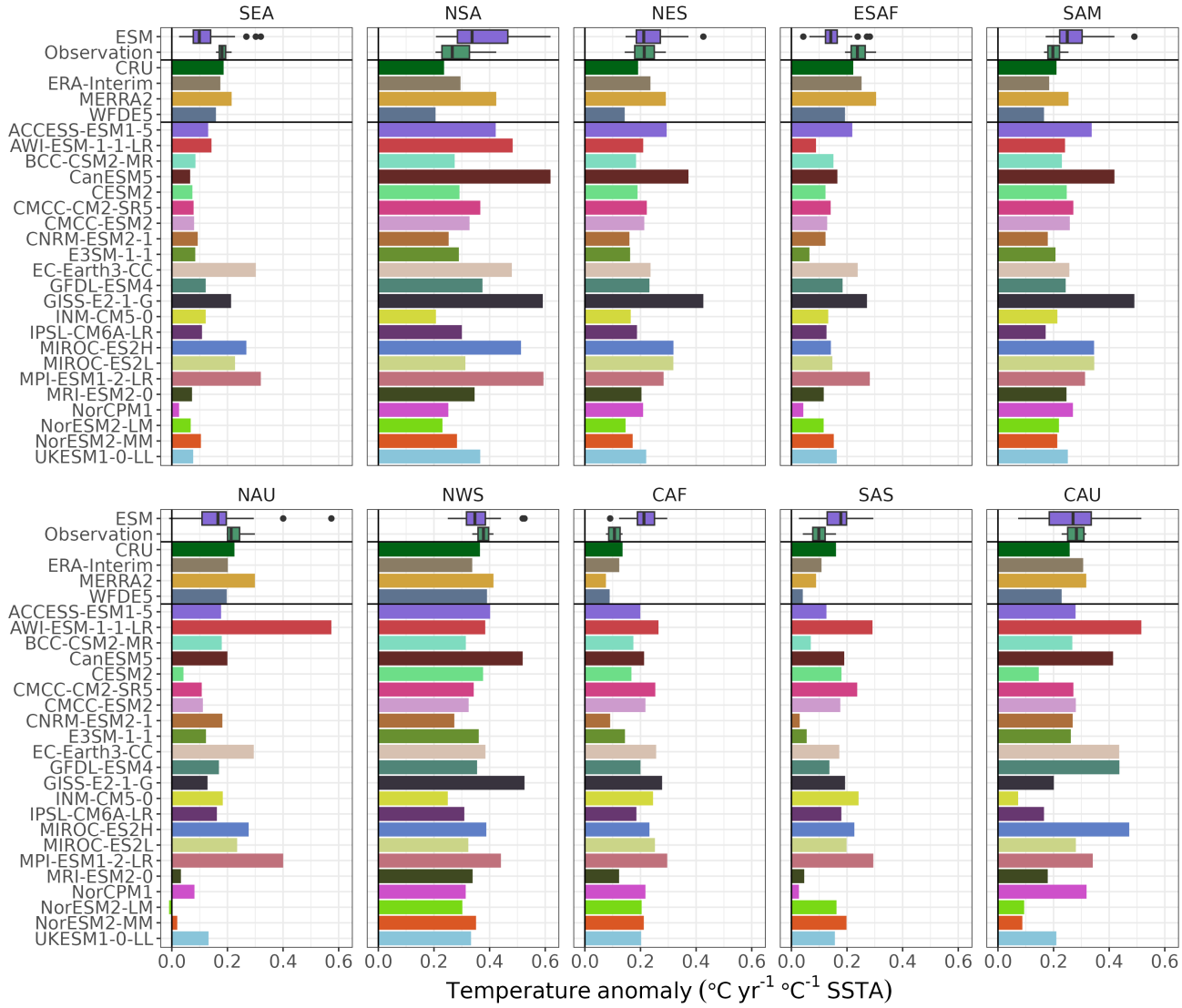

Figure S2: Regional ENSO-induced annual temperature anomalies. The values are the sensitivity of annual temperature anomalies to Niño3.4 SSTA (β_{ET}).

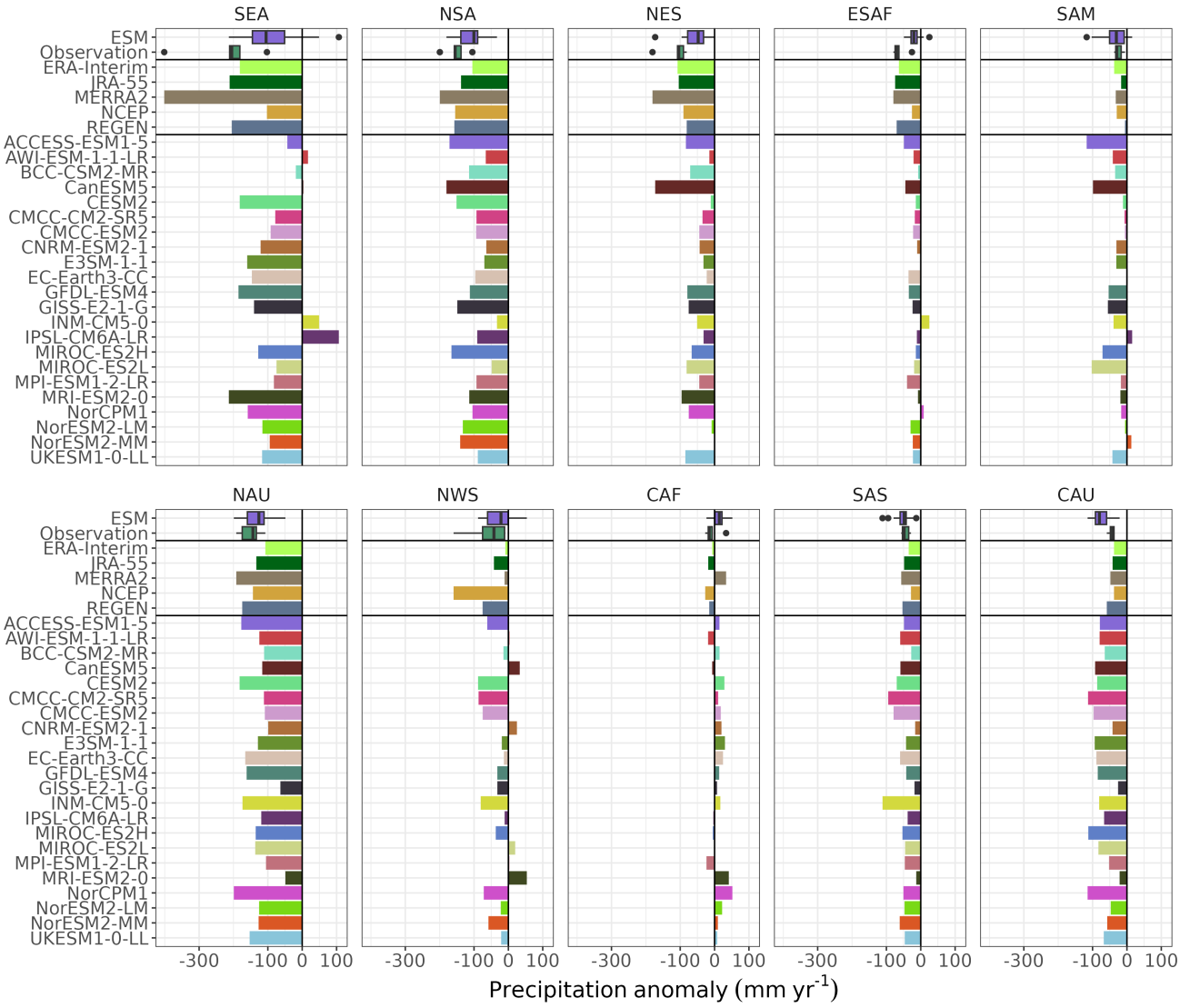

Figure S3: Regional ENSO-induced annual precipitation anomalies. The values show the sensitivity of annual precipitation anomalies to Niño3.4 SSTA (β_{Ep}).

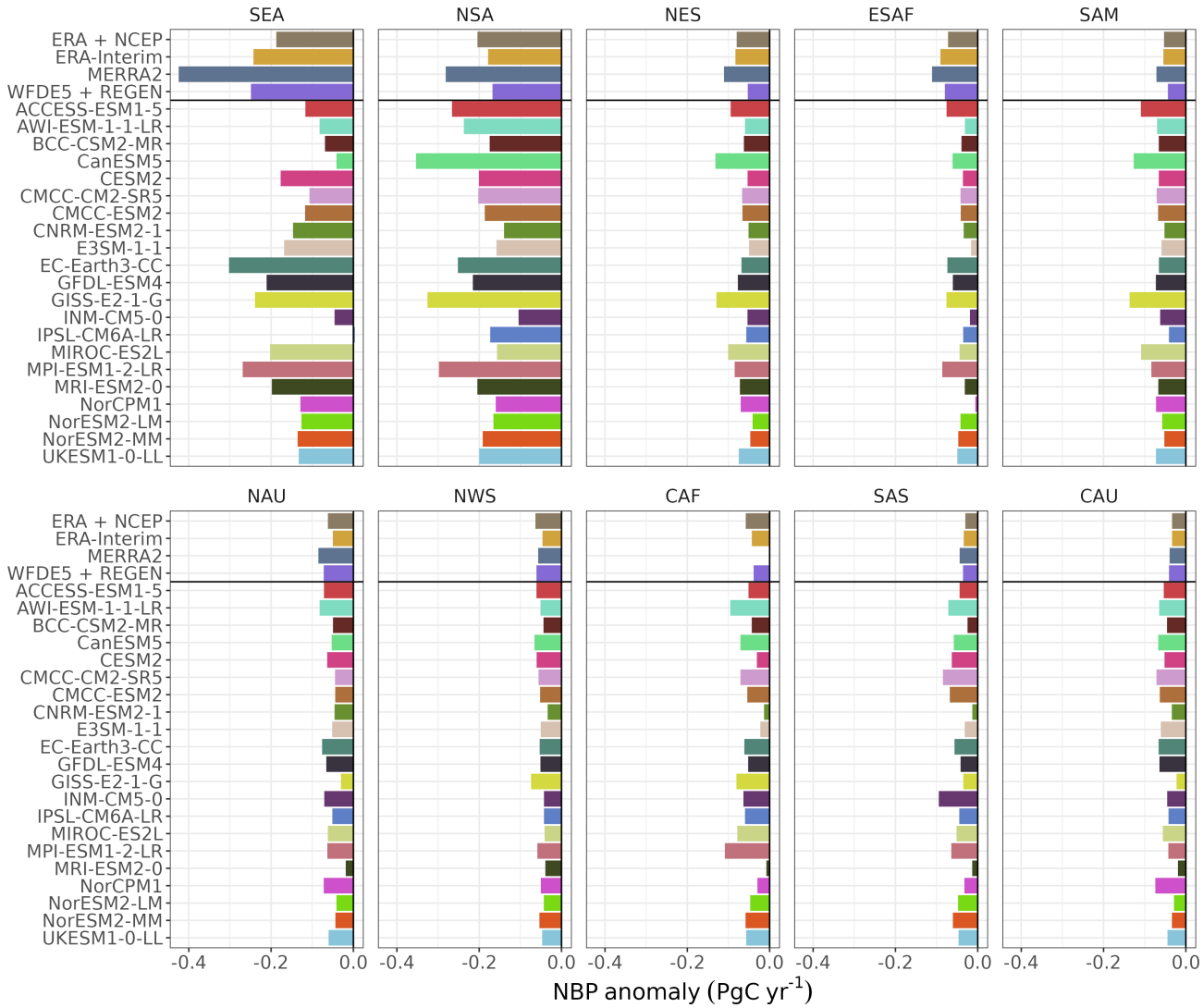

Figure S4: The effect of differences in ENSO-induced climate anomaly patterns on regional NBP anomalies. The climate anomaly patterns of a 90th percentile El Niño from ESMs and climate reanalysis products are applied to a linear regression model to reproduce global NBP anomalies.