Figure S1: Taylor diagrams of regional relationships between modelled and observed GPP responses to intraseasonal wet events, as in Figure 3 of main paper but using GLEAM surface soil moisture to scale peak and post-event amplitudes (whereas Figure 3 uses ESA CCI).
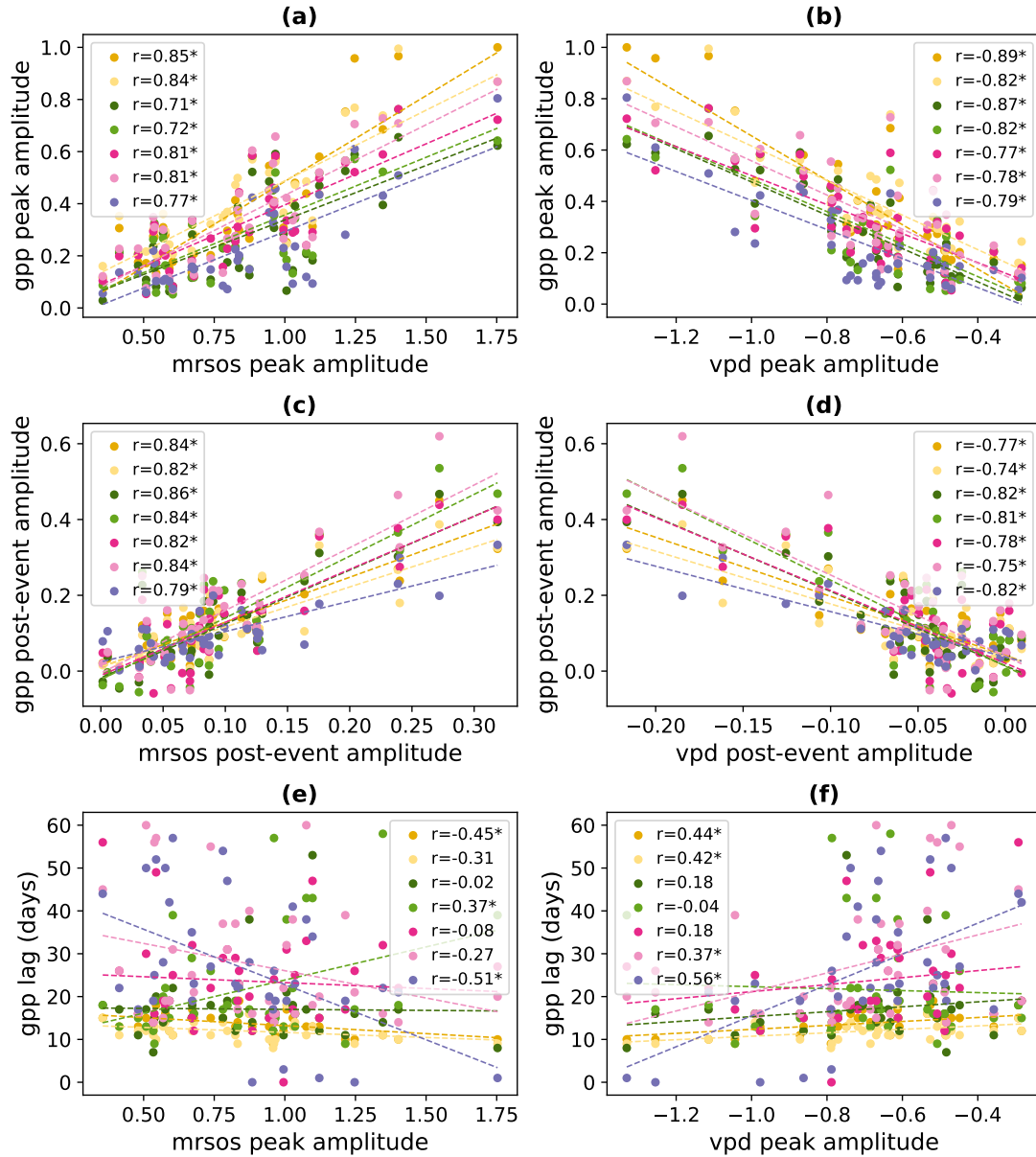
Figure S2: Regional GPP responses to intraseasonal wet events compared to the driving perturbations in surface soil moisture (a, c, e) and vapour pressure deficit (b, d, f), using GPP observation-based products. As in Figure 4, each scatter point represents an IPCC AR6 region and dashed lines show linear best fits. The legend for each panel indicates the linear correlation coefficient between the driving perturbation and the GPP response for each product. Asterisks after correlation coefficients denote significance at the 95% level. Surface soil moisture data is taken from ESA CCI and VPD data from ERA5.
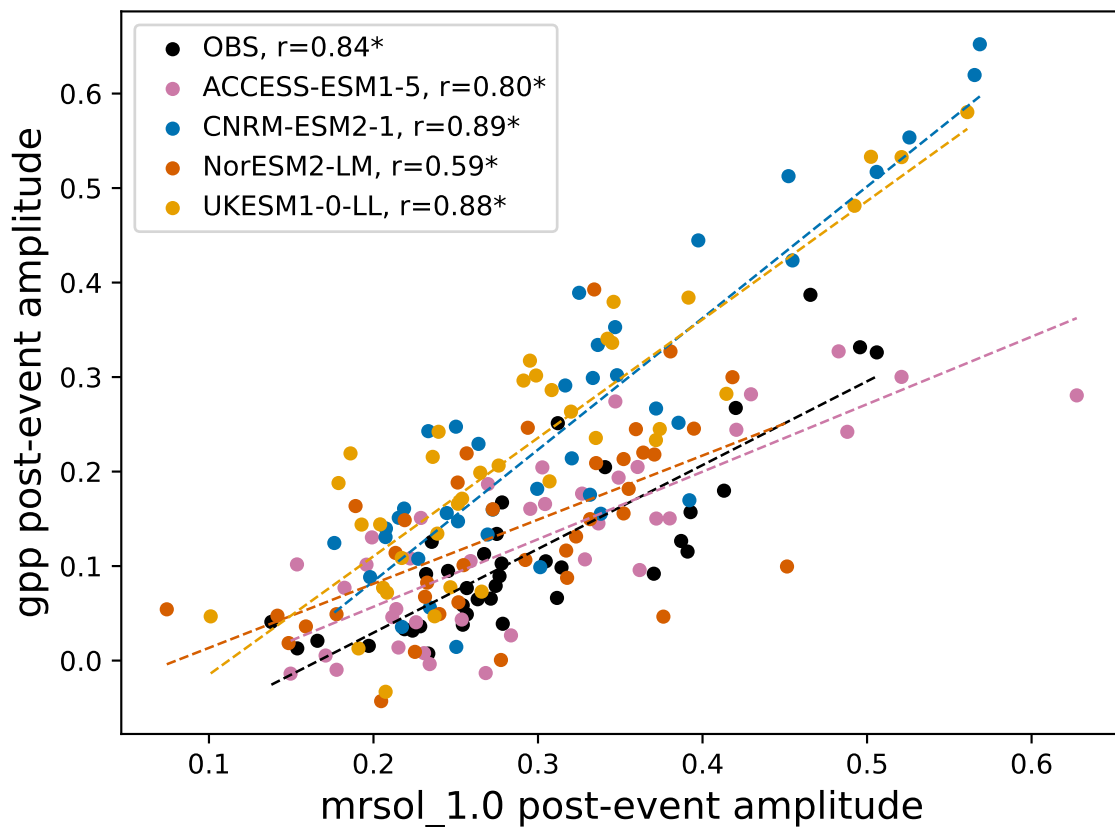
Figure S3: Regional post-event amplitudes in GPP response to intraseasonal wet events compared to the driving post-event perturbations in 1m root-zone soil moisture. The observational product is GLEAM root-zone soil moisture [note that the root-zone depth of this product is 1m only in areas with "low vegetation" (Martens et al., 2017)].

References

Martens, B., Miralles, D. G., Lievens, H., Van Der Schalie, R., De Jeu, R. A., Fernández-Prieto, D., Beck, H. E., Dorigo, W. A., and Verhoest, N. E.: GLEAM v3: Satellite-based land evaporation and root-zone soil moisture, Geoscientific Model Development, 10, 1903–1925, https://doi.org/10.5194/GMD-10-1903-2017, 2017.