Supplemental material for: Natural wetland methane emissions simulated by ICON-XPP

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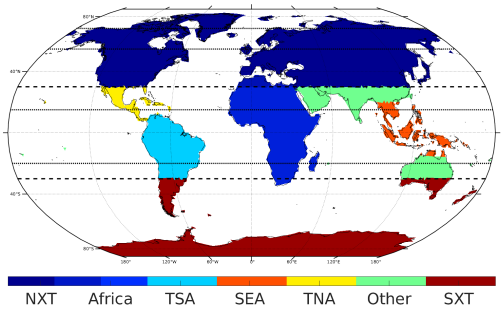

Figure S1. Regions used for this study: NXT: Northern Extratropics, TSA: Tropical South America, SEA: South East Asia, TNA: Tropical North America, Other: Tropical areas not belonging to any other of the tropical regions, SXT: Southern Extratropics. Dashed lines indicate the general separation between tropics and extratropics and the "boreal" and "tropical" wetland bands discussed in Sec. 4.1 in the main text are encapsulated in dotted lines. Note that Africa north of 30°N is included in both the NXT and Africa regions.

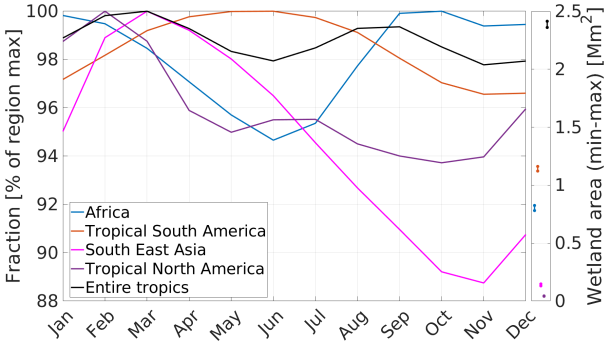

Figure S2. Tropical wetland area seasonal cycle for the different tropical regions (Fig. S1) in the "Base" experiment, 1855-2014. Main panel: seasonal cycle of continental wetland areas relative to the continental monthly maximum (black curve is for all tropics and thus corresponding to the gray curve in Fig. 2). Right side panel: Monthly minimum and maximum absolute wetland areas for the individual continents.

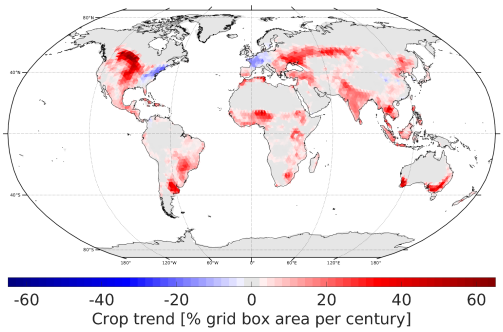

Figure S3. 100 year trend in crop area fraction, 1855-2014.

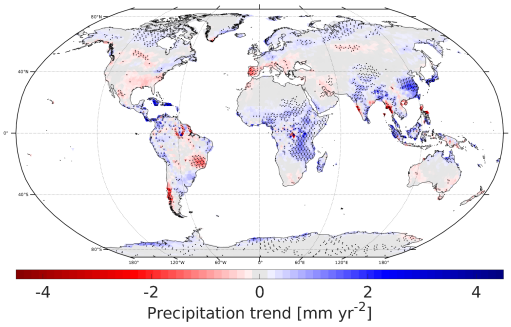

Figure S4. "Base" experiment 100 year trend in precipitation, 1855-2014. Black dots mark cells with trends significant at the 95% level according to Matlab's fitlm function.

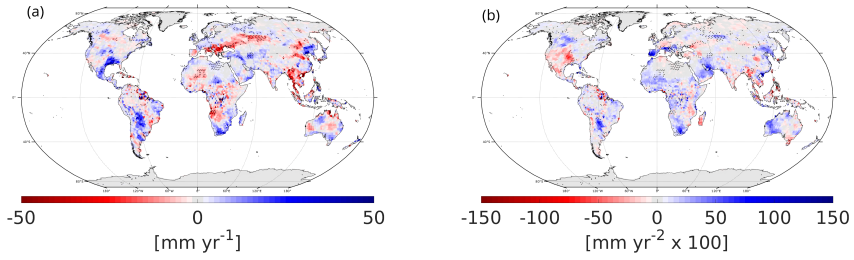

Figure S5. Mean difference in evapotranpiration (a) and evapotranspiration trend (b) between "ConstCO2" and "Base". Black dots mark cells significantly different at the 95% level between the experiments according to Matlab's ttest function.

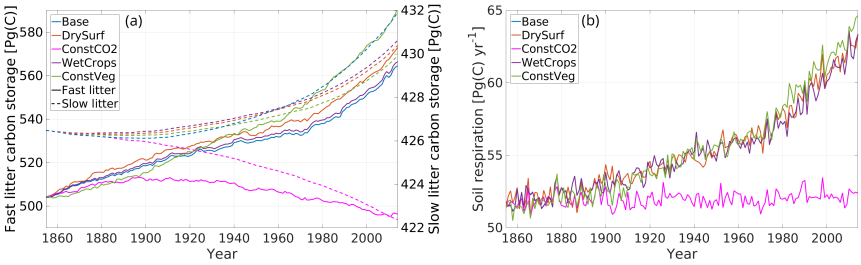

Figure S6. (a) Global dead carbon available for decomposition spitted into fast decomposable (solid) and slowly decomposable (dashed) components. (b) Decomposition rate of this carbon.

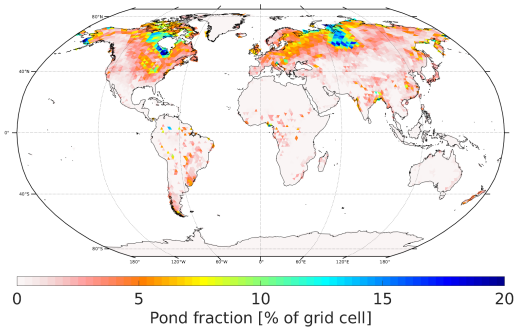

Figure S7. Average wet fraction of grid cell calculated by the Surface Water Retention scheme in the "Base" experiment.