

## Supplementary Information B: Additional model Output

March 27, 2015

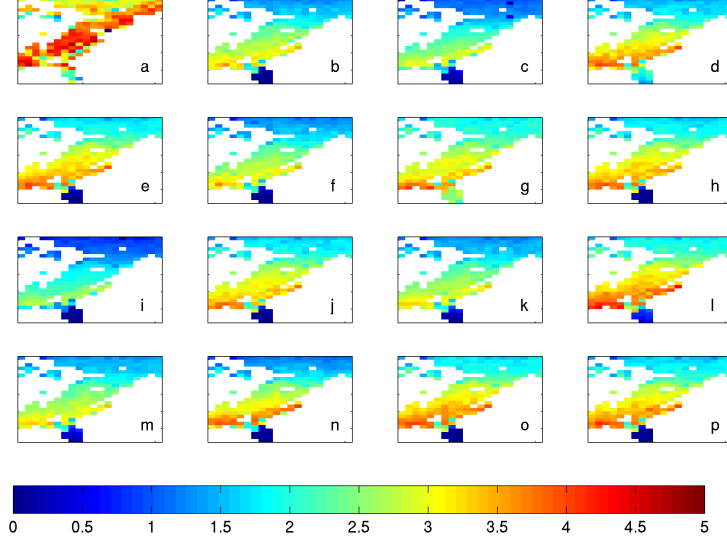


Figure 1: Mean Annual Leaf Area Index ( $\text{m}^2 \text{ m}^{-2}$ ) projected with structural variant i. (Control). MODIS LAI product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

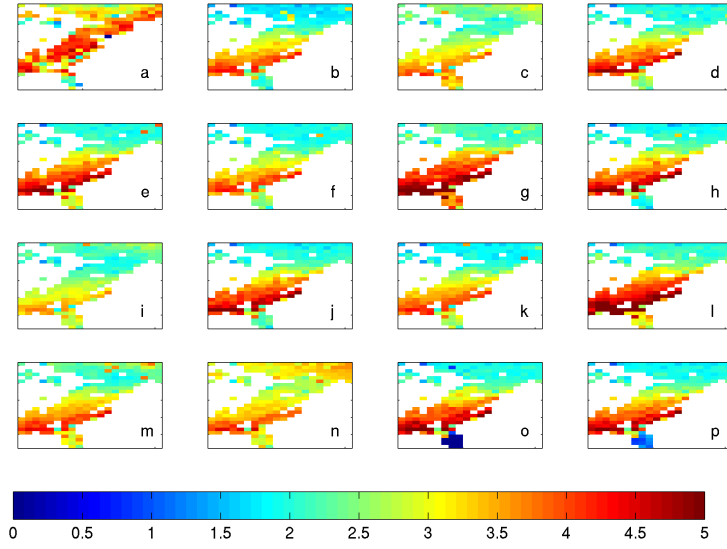


Figure 2: Mean Annual Leaf Area Index ( $\text{m}^2 \text{ m}^{-2}$ ) projected with structural variant ii. (Control+ALLOC). MODIS LAI product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

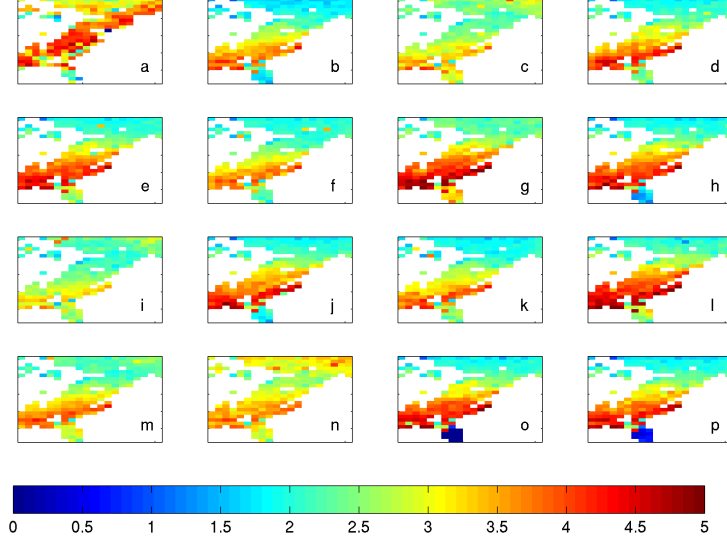


Figure 3: Mean Annual Leaf Area Index ( $\text{m}^2 \text{ m}^{-2}$ ) projected with structural variant iii. (Control+ALLOC+RESP). MODIS LAI product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

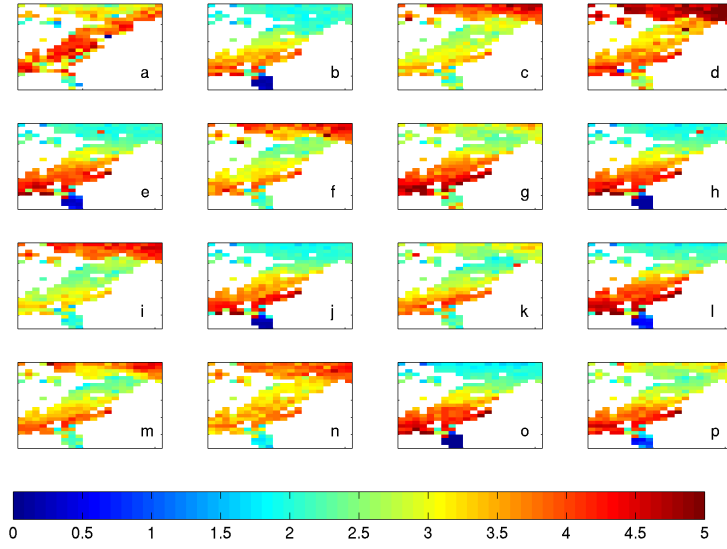


Figure 4: Mean Annual Leaf Area Index ( $\text{m}^2 \text{ m}^{-2}$ ) projected with structural variant iv. (Control+ALLOC+RESP+LL\_TEMP). MODIS LAI product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

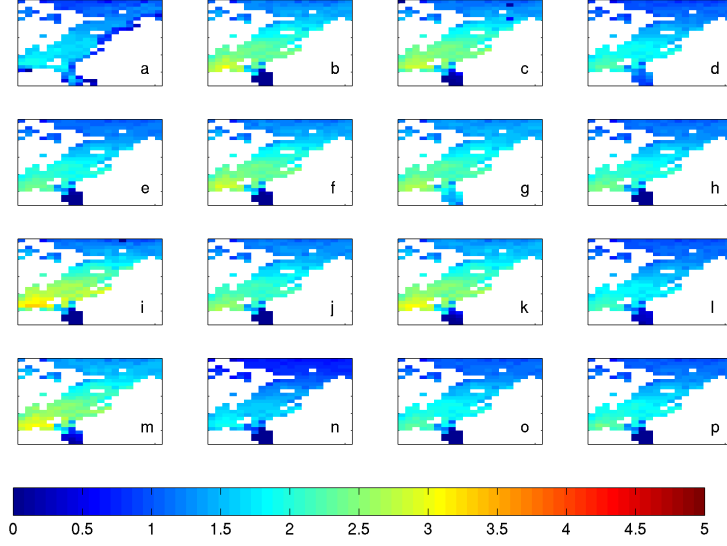


Figure 5: Mean annual GPP in  $\text{KgC m}^{-2} \text{ year}^{-1}$  projected with structural variant i. (Control). Fluxnet GPP product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

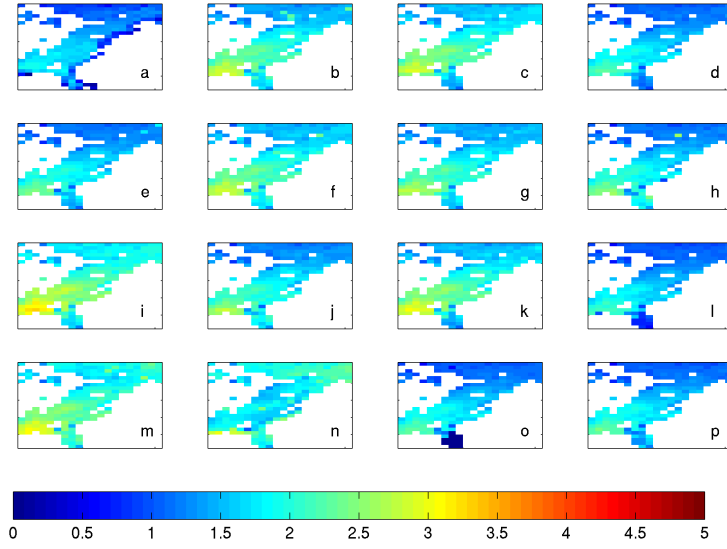


Figure 6: Mean annual GPP in  $\text{KgC m}^{-2} \text{ year}^{-1}$  projected with structural variant ii. (Control+ALLOC). Fluxnet GPP product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

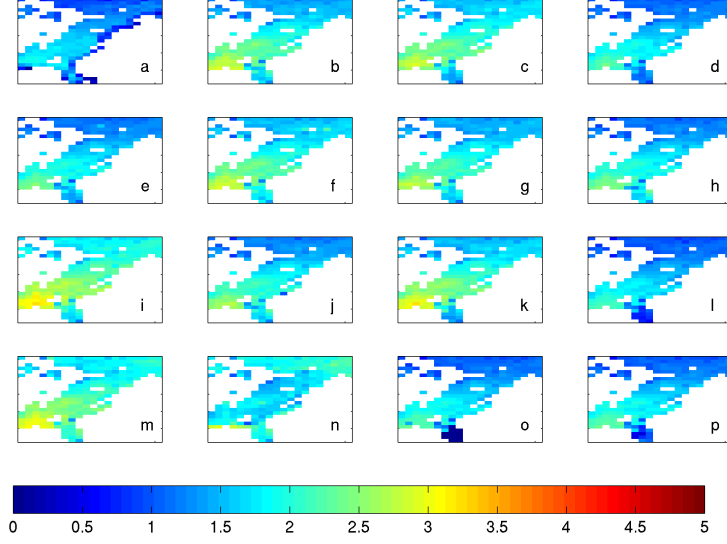


Figure 7: Mean annual GPP in  $\text{KgC m}^{-2} \text{ year}^{-1}$  projected with structural variant iii. (Control+ALLOC+RESP). Fluxnet GPP product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.

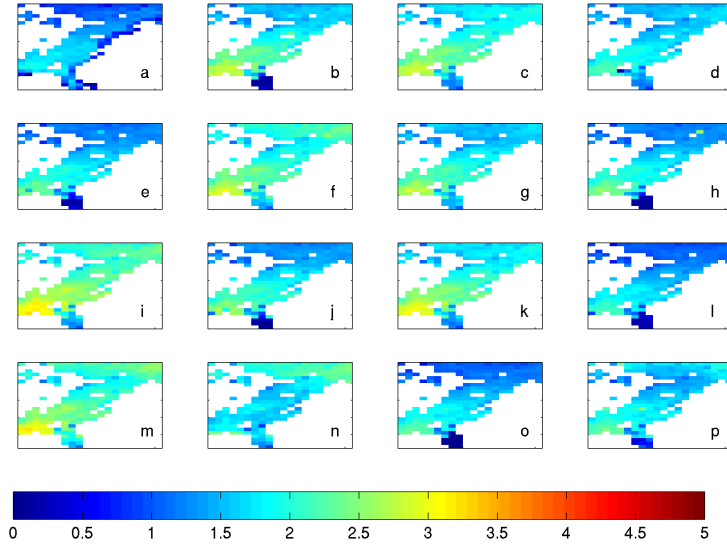


Figure 8: Mean annual GPP in  $\text{KgC m}^{-2} \text{ year}^{-1}$  projected with structural variant v. (Control+ALLOC+RESP+LL\_TEMP). Fluxnet GPP product data are shown in panel a. Panels b-p correspond to the 15 parameter combinations in Table 2 of the main text.