Corrigendum to Biogeosciences, 15, 5969–5989, 2018
https://doi.org/10.5194/bg-15-5969-2018-corrigendum

Biogeosciences Open Access EGU

Corrigendum to "Tropical climate–vegetation–fire relationships: multivariate evaluation of the land surface model JSBACH" published in Biogeosciences, 15, 5969–5989, 2018

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Published: 6 February 2019

We identified a processing error with the MPI-ESM precipitation. The monthly precipitation output file contained only the value for the last day instead of the monthly average. A number of figures (Figs. 1, 3, 4, 5, 6, 7, A1 and A2) and Table 1 included this error. The error does not change any of our conclusions and is often hardly visible by eye. No changes in the text are necessary. Additionally we found a wrong label in Fig. 4 (JSBACH-JSBACH instead of JSBACH-standard).

Published by Copernicus Publications on behalf of the European Geosciences Union.

Table 1. Spearman rank correlation (R) between precipitation (P) and tree cover (TC), and rank correlation between burned fraction (BF) and TC for data points with mean annual precipitation higher than 1000 mm and tree cover less than 0.8. The required precipitation [mm yr^{-1}] for $0.05 < TC < 0.15$ and $0.85 < TC < 0.95$, estimated as 0.05 quantile of precipitation for grid cells with the specific TC only, and precipitation value [mm yr^{-1}], where 10 % and 90 % of the burned area (BA) originate from areas with lower precipitation. For the remote-sensing datasets TMPA was used as precipitation; for the simulations (Hist, cLU, and JSBACH-standard) the MPI-ESM precipitation was used. Model results are all in 1.875° resolution.

Data	R (P, TC)	R (BF, TC)	0.05 quantile of P for $0.05 < TC < 0.15$	0.05 quantile of P for $0.85 < TC < 0.95$	10 % of BA has lower P	90 % of BA has lower P
Landsat 0.25°	0.90	−0.05	568	1417		
Landsat 1.875°	0.91	−0.08	569		1596	
MODIS 0.25°	0.91	−0.26	425	1514		
MODIS 1.875°	0.93	−0.4	462	1644		
GFED v4 0.25°					607	1517
GFED v4 1.875°					635	1489
JSBACH-SPITFIRE Hist	0.81	−0.56	57	1316	647	1645
JSBACH-SPITFIRE cLU	0.80	−0.67	31	1040	687	1612
JSBACH-standard	0.89	0.17	66	1633	310	1483

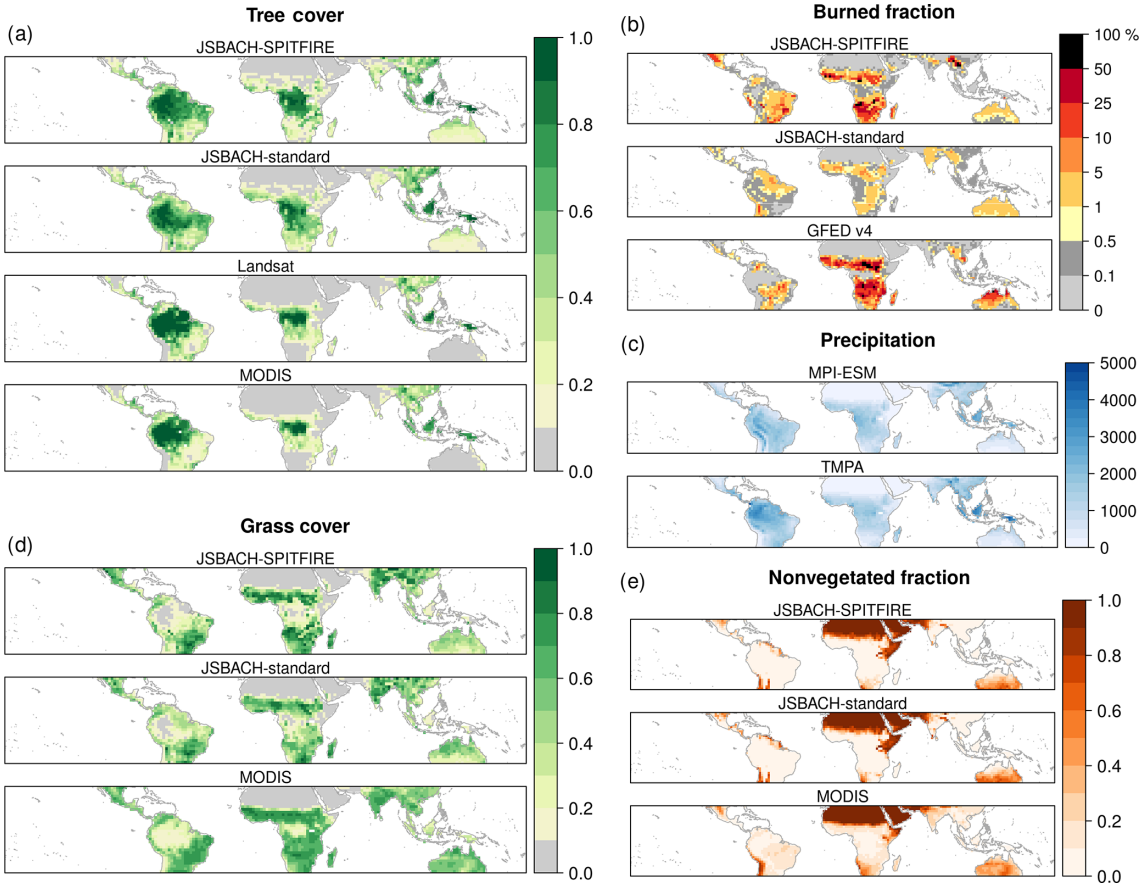

Figure 1. Spatial distribution of modelled and observed datasets used in this study. **(a)** Spatial distribution of tree cover fraction over the global tropics for the JSBACH-SPITFIRE and JSBACH-standard model simulation and the satellite data products from Landsat and MODIS. **(b)** Burned fraction [yr^{-1}] as modeled by JSBACH-SPITFIRE and JSBACH-standard and the GFED v4 satellite product. **(c)** Precipitation in mm yr^{-1} of the MPI-ESM and the TMPA datasets. **(d)** Grass cover fraction and **(e)** nonvegetated fraction of the grid cell for the models and the MODIS satellite product. All datasets were remapped to the 1.875° model resolution.

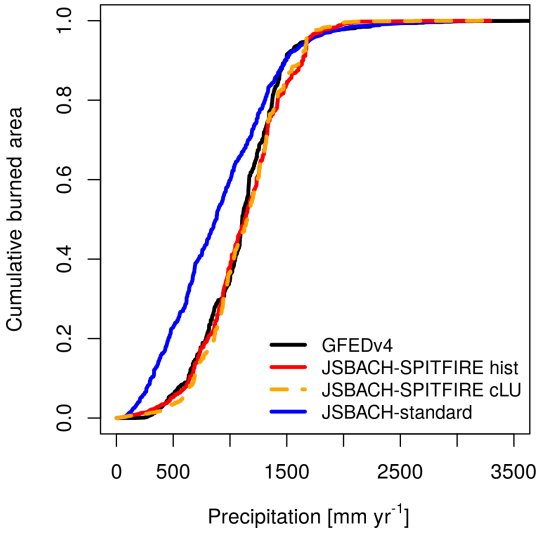

Figure 2. Cumulative burned area normalized with the total burned area for increasing precipitation. For the GFEDv4 burned area the TMPA dataset was used; for the model simulations the MPI-ESM precipitation was used.

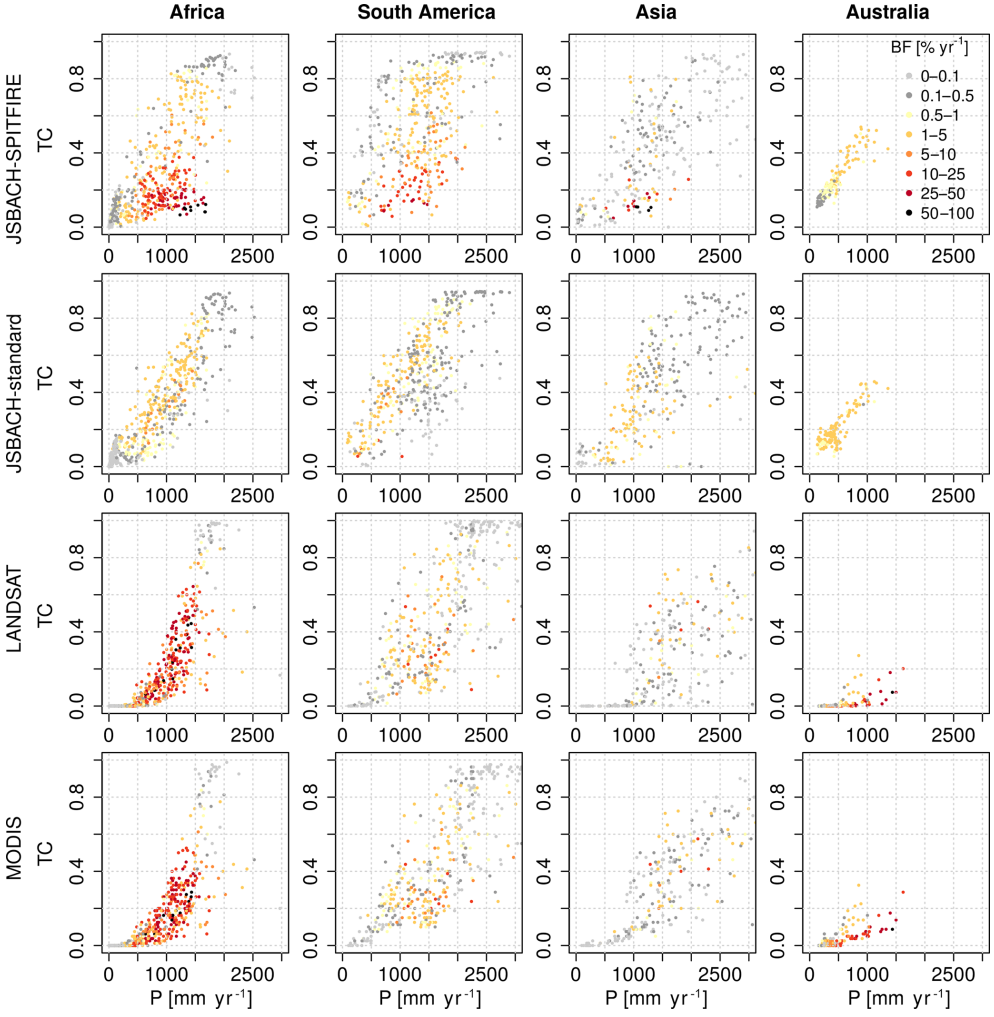

Figure 3. Modelled and observed tree cover (TC) vs. precipitation (P), color-coded burned-area fraction (BF). Satellite datasets were aggregated to model grid resolution (1.875°).

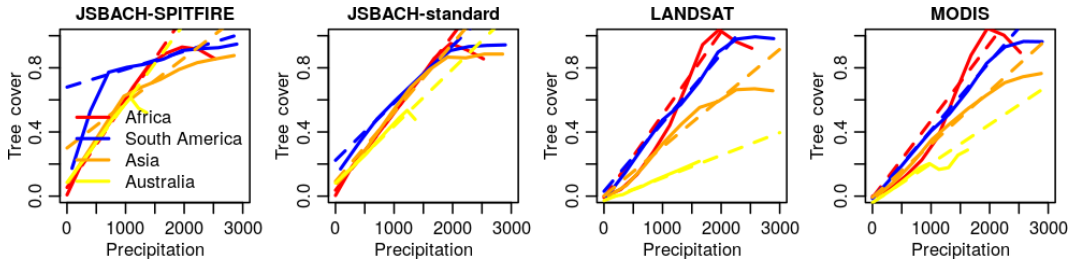

Figure 4. Modelled and observed relationship between precipitation and maximum tree cover based on a linear quantile regression (dashed line) and a local quantile regression (solid line). Different colors indicate the different continents.

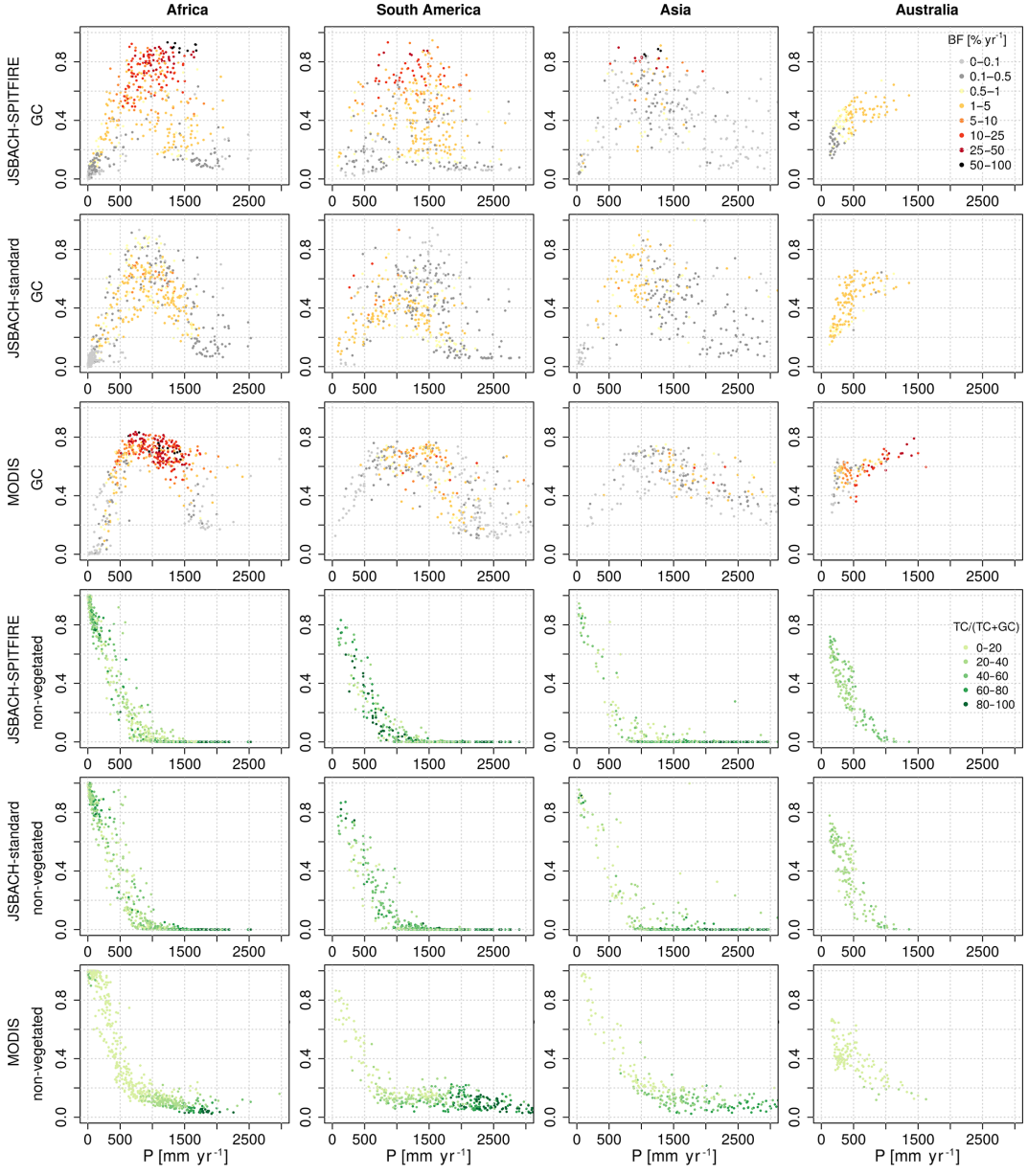

Figure 5. Modelled and observed grass cover (GC) and nonvegetated fraction over precipitation (P), with color-coded burned-area fraction (BF) for the grass cover and dominance of trees as (TC divided by total vegetation cover) for the nonvegetated fraction.

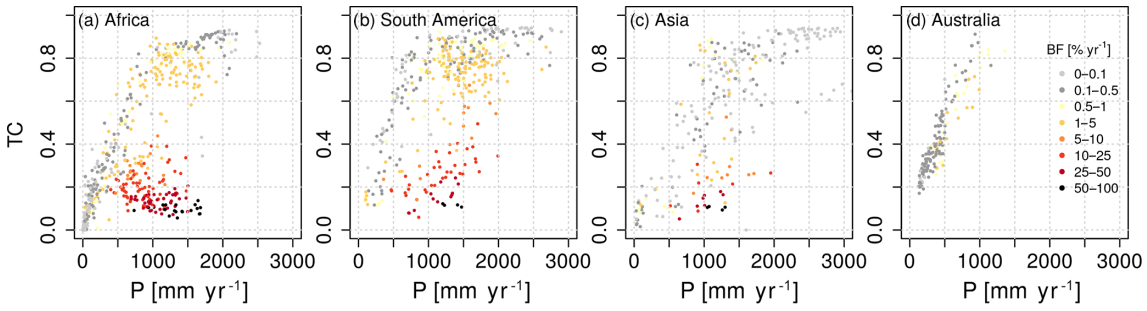

Figure 6. Same as Fig. 3 for JSBACH-SPITFIRE but with preindustrial land use.

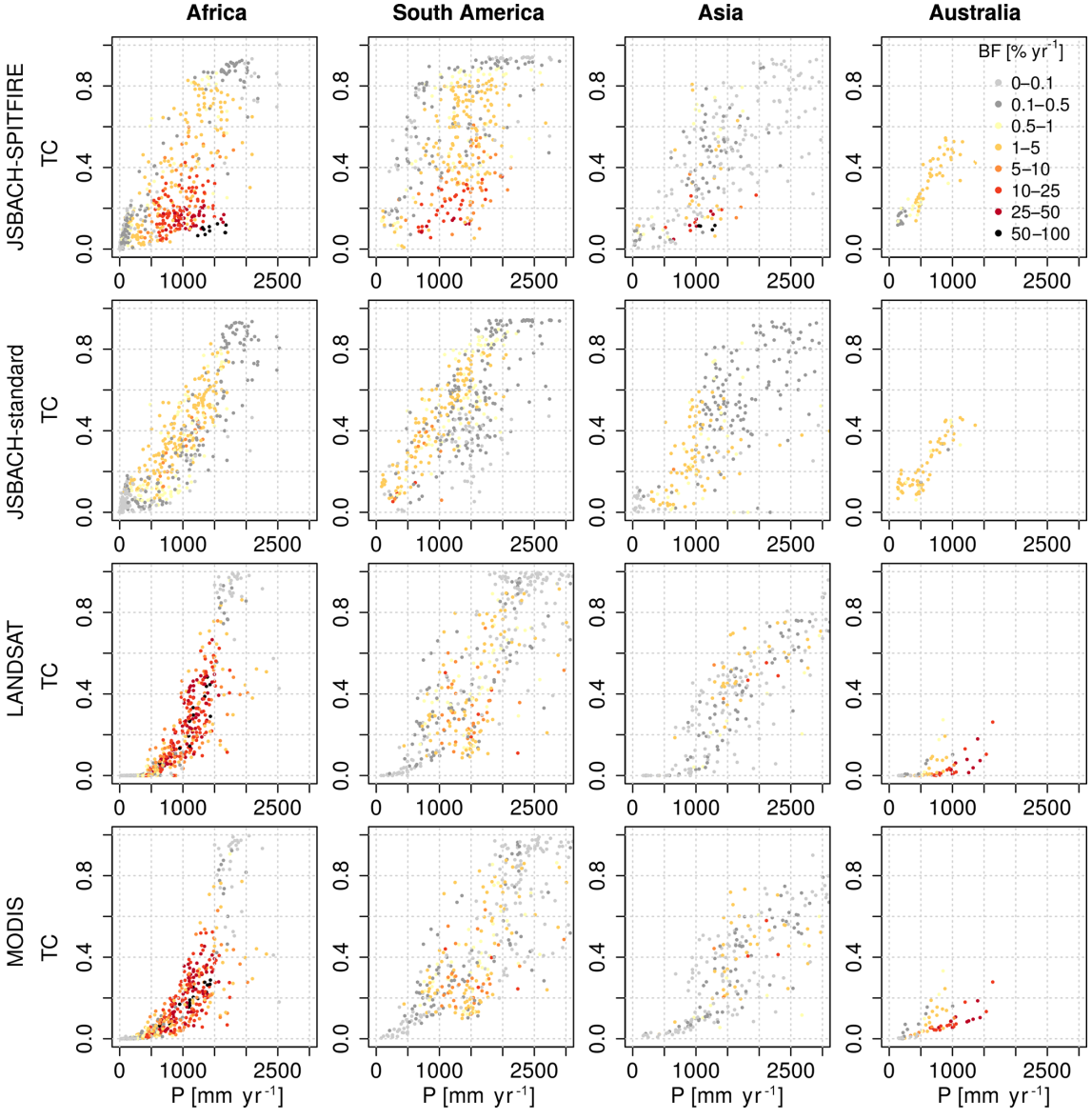

Figure A1. Same as Fig. 4 but tree cover filtered for the presence of shrub lands (using the MODIS open and closed shrub land classification). This indicates a low sensitivity of the fire–vegetation-climate relationships to shrub lands.

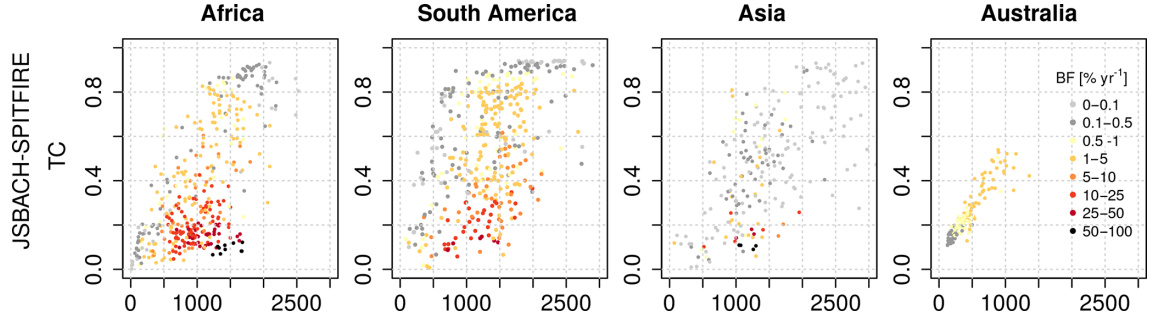

Figure A2. Modelled tree cover (TC) vs. precipitation (P) [mm yr^{-1}]. Modelled tree cover was filtered for vegetation height of trees < 5 m using the modelled vegetation height. This value is given as detection threshold for the satellite products. When filtering the model output with this threshold the differences to the unfiltered dataset are very small (compare with Fig. 4, panels for JSBACH-SPITFIRE).