Supplementary Table

Table S1: List of scalars applied to GOSIF (based on SIF retrievals at 757 nm) on an 8-day time step, specific to each vegetation type. The squared correlation coefficients (R^2) between GOSIF and TROPOSIF from 2018 to 2020 across different vegetation classes are also indicated.

Vegetation classification	S_{GOSIF} (2018 - 2020)	R^2 (GOSIF *vs* TROPOSIF) (2018 - 2020)
Grassland	2.81	0.22
Cropland	4.62	0.45
Savanna	4.35	0.56
Shrubland	4.35	0.62
Deciduous forest	4.17	0.56
Evergreen forest	4.02	0.52

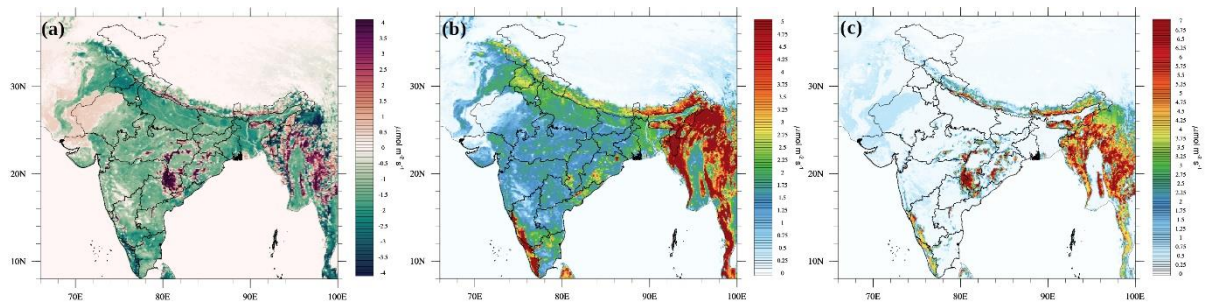| Mixed forest	3.94	0.55

Supplementary figures

Fig. S1: Spatial pattern in the standard VPRM simulated annual fluxes of a) NEE, b) GPP and c) R$_{eco}$ over the domain for 2016.
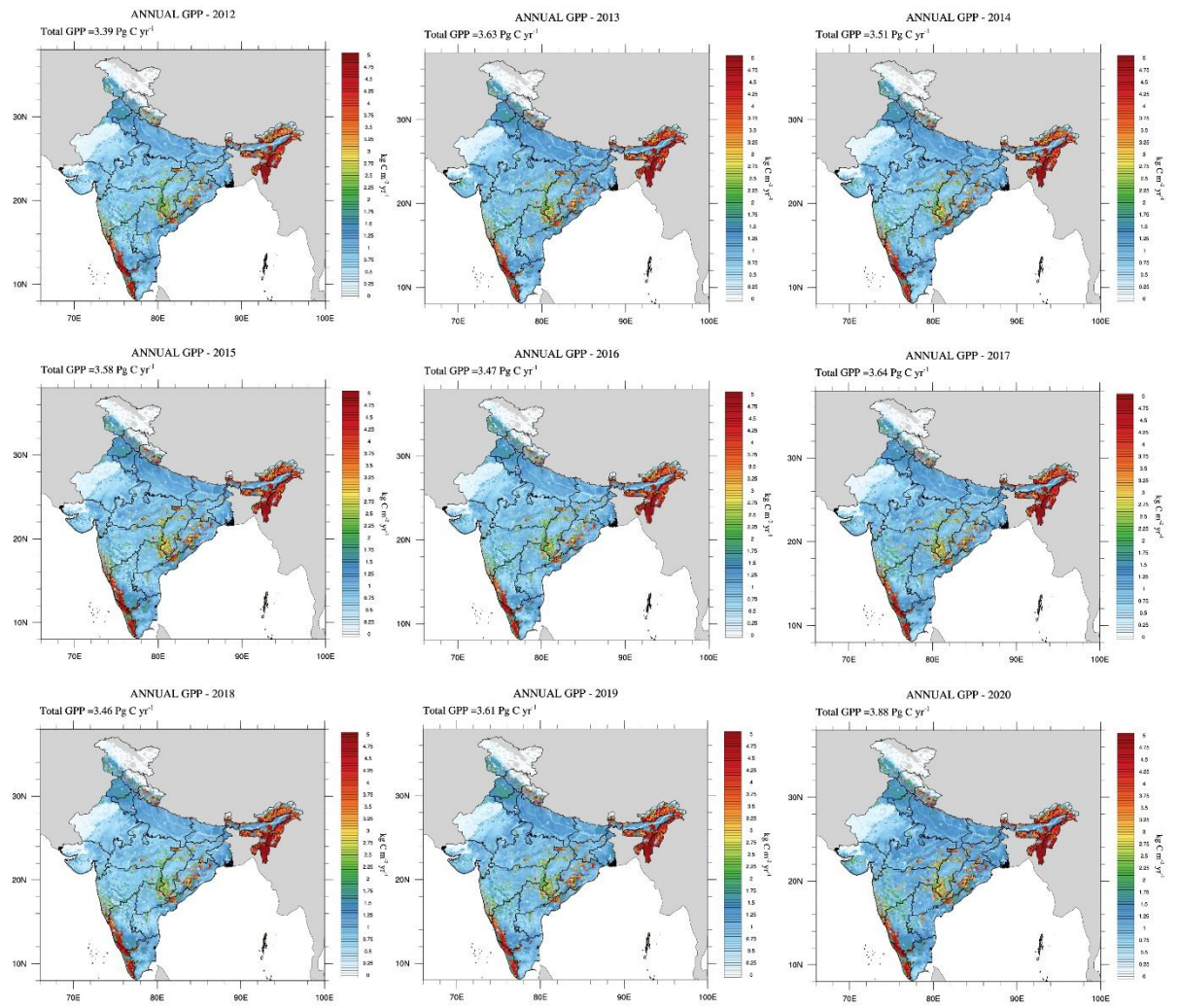
Fig. S2: Spatial patterns in annual GPP fluxes as simulated by VPRM_{TROPOSIF} **over the Indian region for the years from 2012 to 2020.**
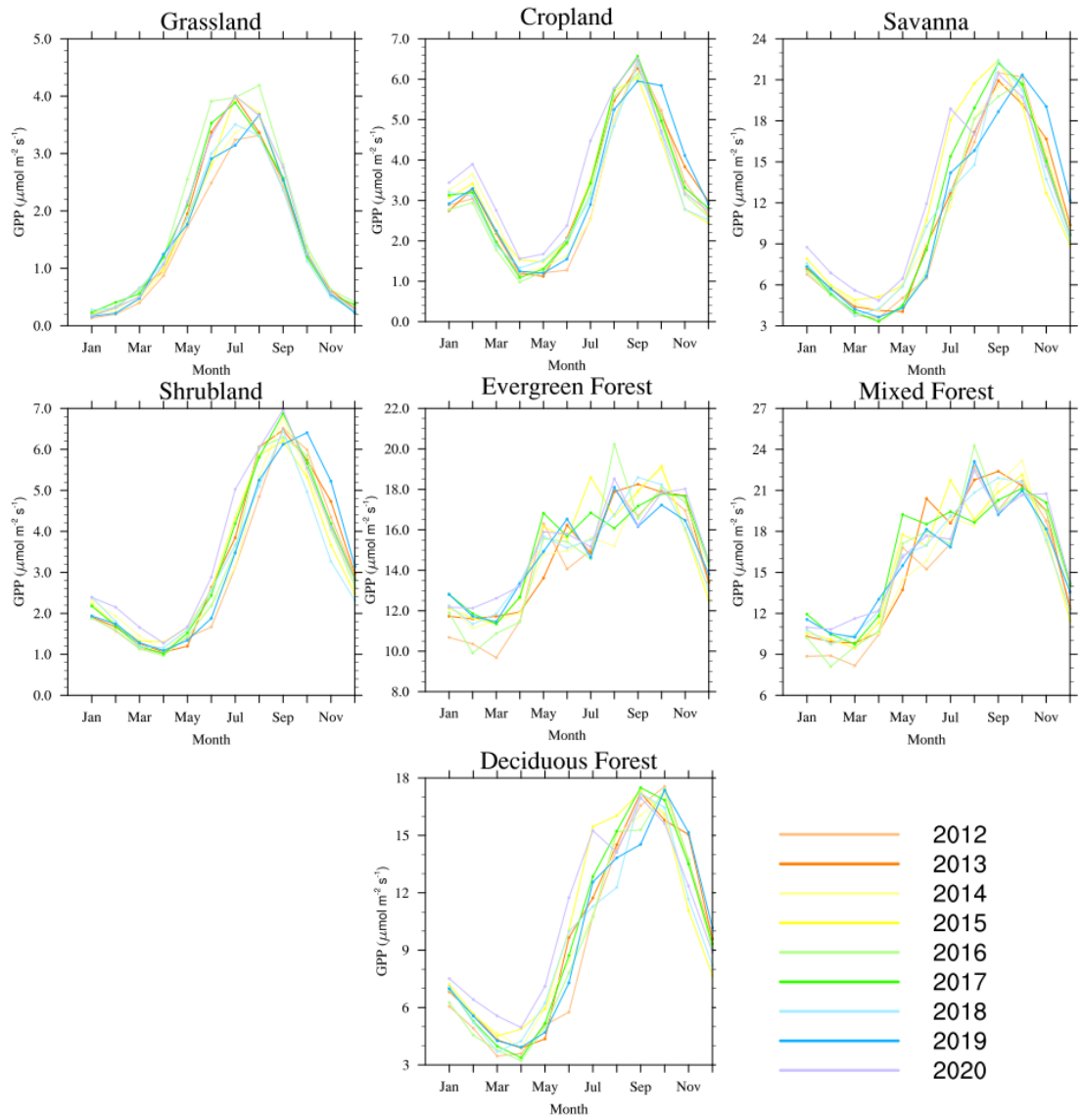
Fig. S3: Temporal variations in monthly averaged GPP fluxes for the years 2012 to 2020.