Supplementary Material

Table S1. The maximal light use efficiency for each vegetation type (Zhu et al. 2006)

Vegetation categories	Maximal light use efficiency (ε_{max}) (gC/MJ)
Evergreen needle leaf forest	0.389
Evergreen broadleaf forest	0.985
Deciduous needle leaf forest	0.485
Deciduous broadleaf forest	0.692
Mixed forest	0.475
Deciduous shrubs and savannas	0. 768
Barren or sparsely vegetated	0. 389
Shrub land	0. 429
Grassland	0. 542
Cropland	0. 542
Others (water, city etc.)	0. 542

Table S2. Comparison of mean NPPT (gC/m^2) simulated in this work with that of other models (i.e. Miami, Thomthwaite, CASA, CEVSA and Zhu), using the average value of the four investigated reservoirs (GPT − Goupitan, HJD − Hongjiadu, SL − Silin, YZD − Yinzidu).

Vegetation type	The simulated NPP$_T$ using CASA model in this work		Miami model	Thomthwaite model	CASA model	CEVSA model	Zhu simulated
	Pre-dam	Post-dam					
Cropland	552.1	504.2	558.2	524.2	216.2	648.3	426.1
Forest	577.2	529.1	449.5	453.4	304.4	517.2	642.5
Grassland	534.0	466.8	625.3	583.2	-	414.1	507.3
Water	-	-	568.6	526.5	-	-	371.2
Urban	-	-	628.1	585.3	-	-	347.6

Figure S1. Comparison between MODIS NPP_T products and CASA mean annual NPP_T