Fig. S1 The effect of eCO$_2$ on biomass carbon gains over different cohorts during three drought events, (a) 2005, (b) 2010, and (c) 2016. The average of R$_{CG}$ over drought epicenter is shown for each cohort.
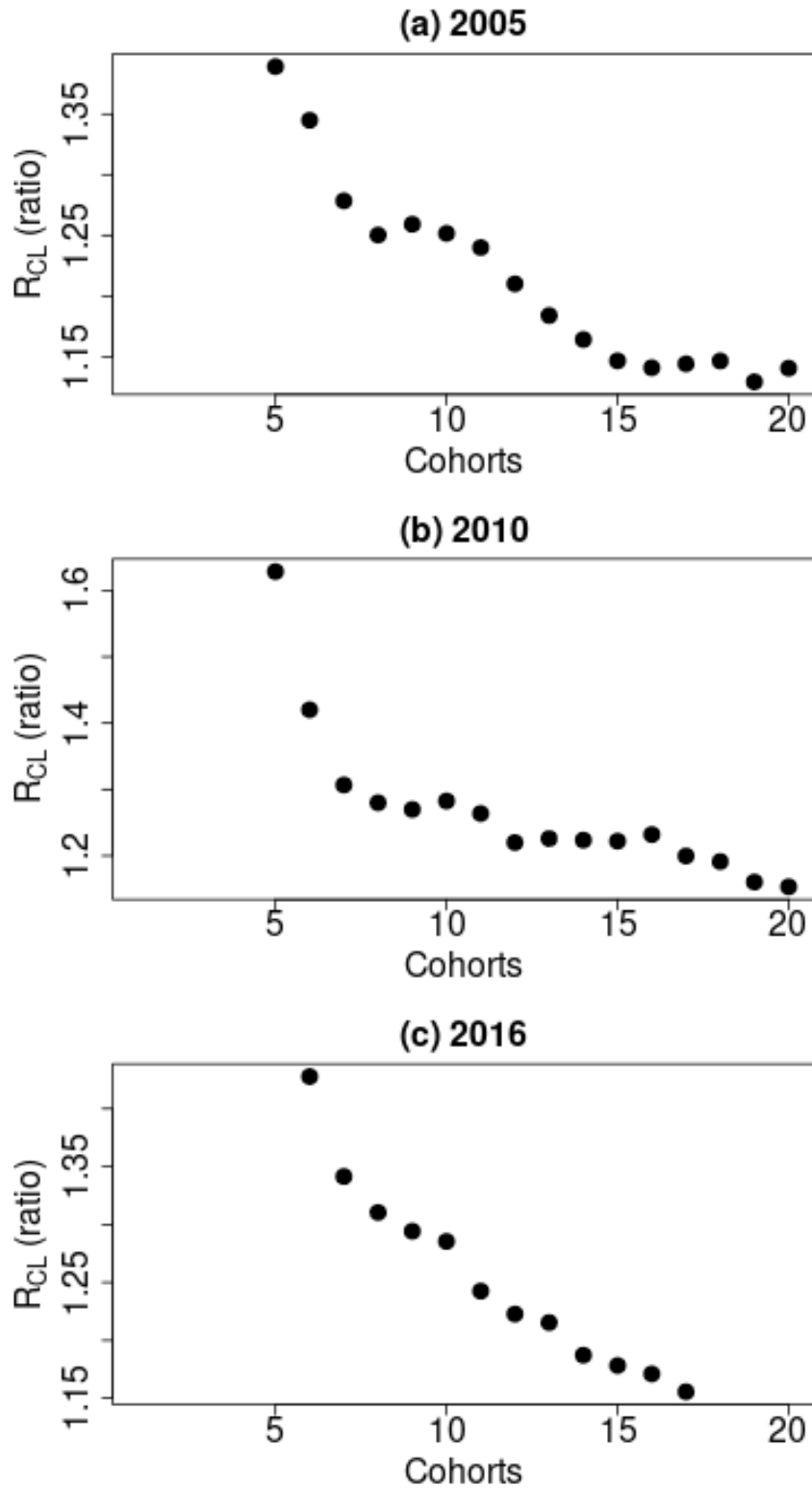
Fig. S2 The effect of eCO₂ on biomass carbon losses over different cohorts during three drought events, (a) 2005, (b) 2010, and (c) 2016. The average of R_{CL} over drought epicenter is shown for each cohort.
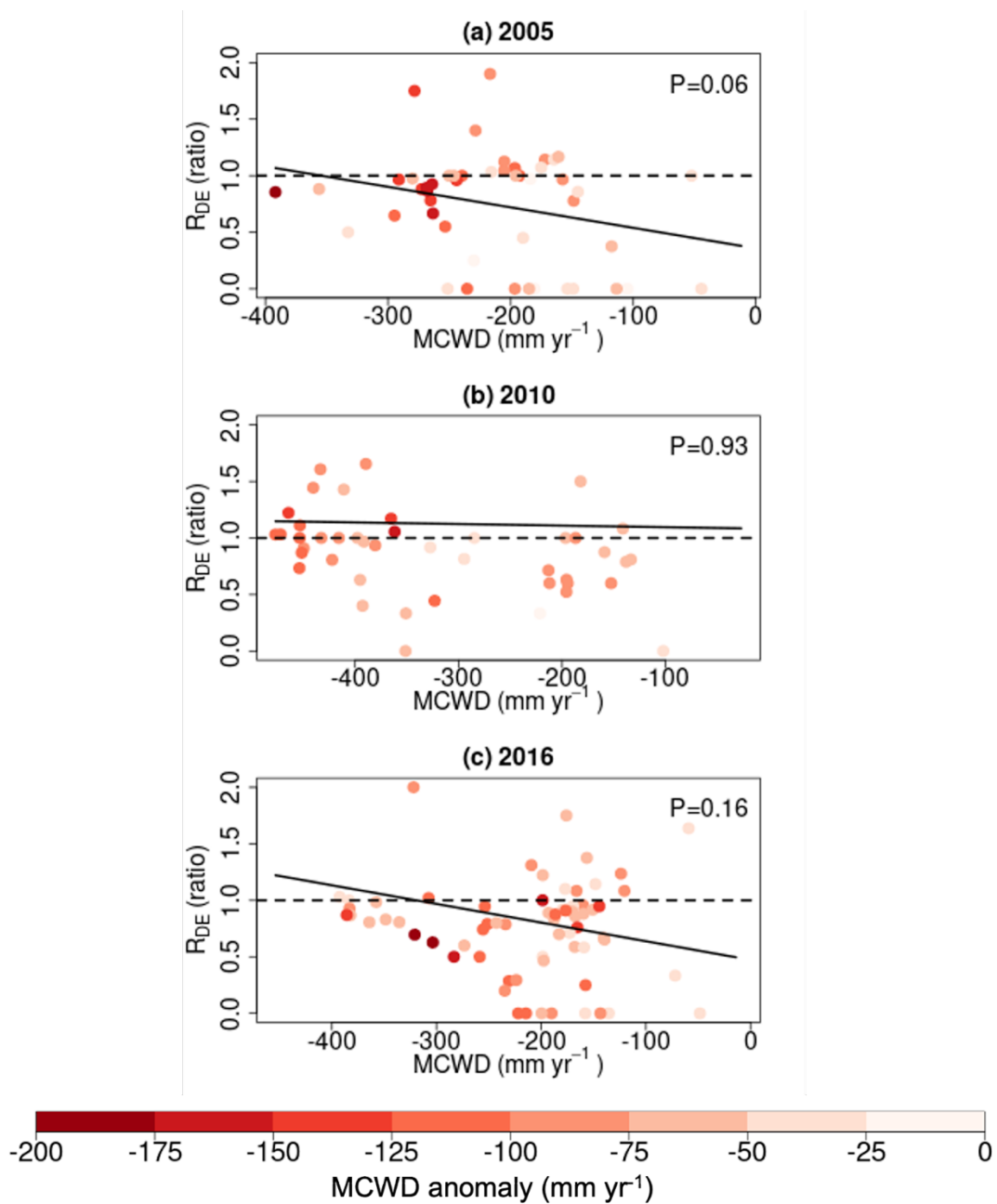
Fig. S3 The effect of eCO₂ on drought exposure days. Dots are color-coded to reflect the drought intensity characterized by MCWD anomaly, with darker colors indicating more severe water deficits. The dots shown in the panel correspond to pixels located in the epicenter of the drought, featuring Z_{MCWD} values below -1. This threshold is set to ensure an adequate number of pixels for our analysis.
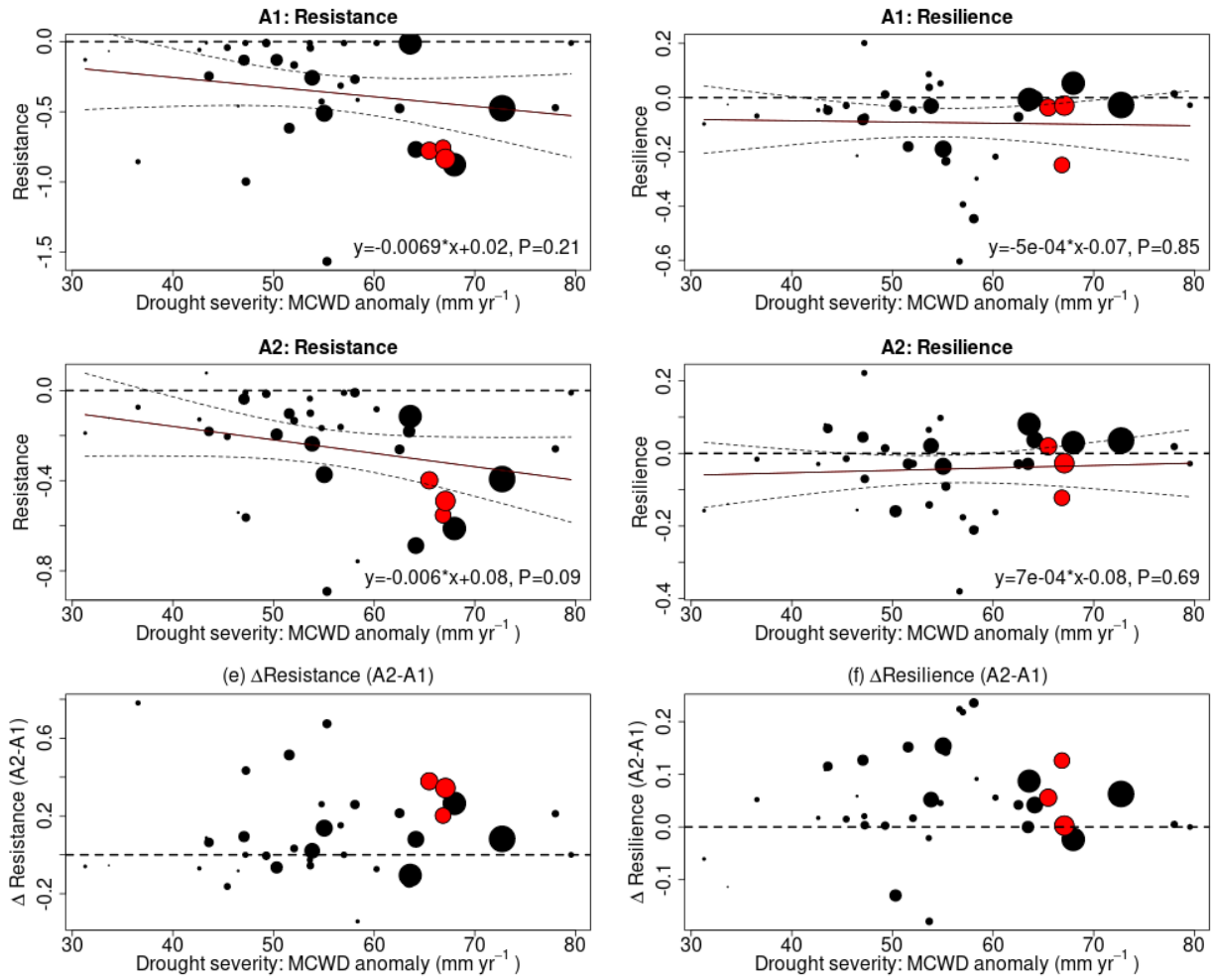
Fig. S4 Similar to Figure 6 but using MCWD anomaly as drought severity metric on the horizontal axis.
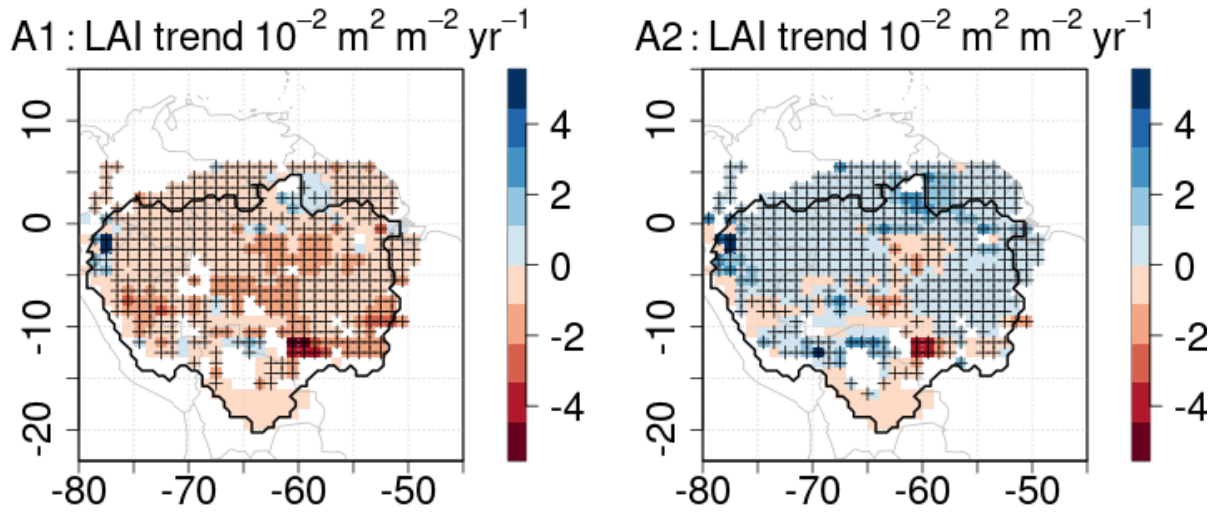
Fig. S5 Spatial distribution of LAI trend over the Amazon rainforest. Markers in the panel denote significant LAI trends over the past four decades (P<0.05).
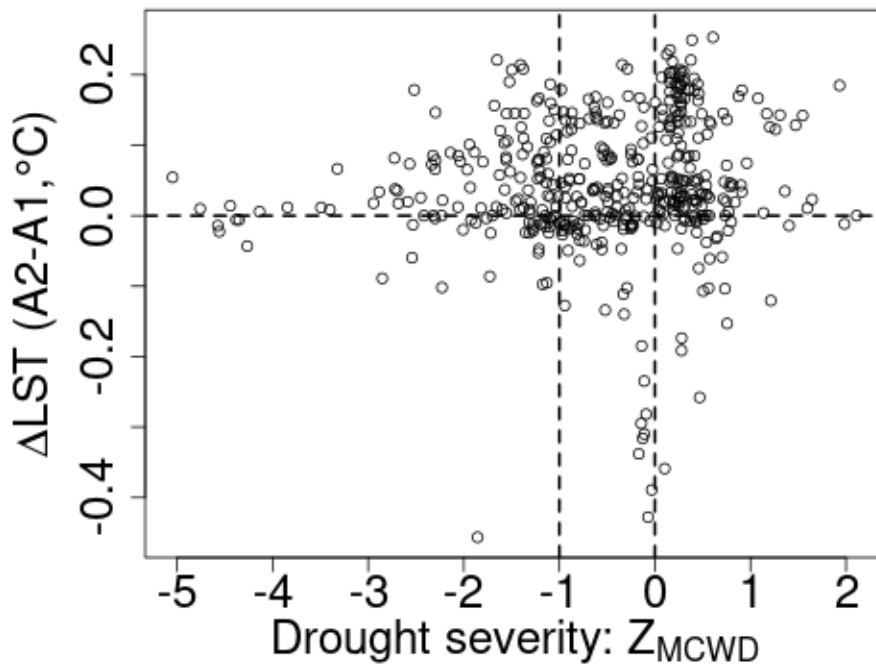
Fig. S6 The land surface temperature change (ΔLST) in relation to Z scores of MCWD due to eCO_2 during 2015-16 El Nino.
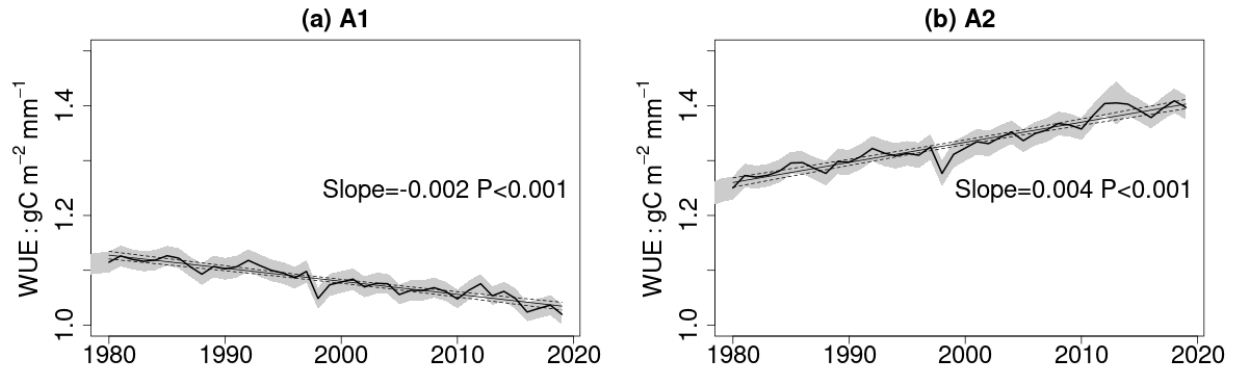
Fig. S7 Trends in water use efficiency (WUE) in (a) A1 and (b) A2. Here WUE is calculated as the ratio between annual GPP and annual ET.