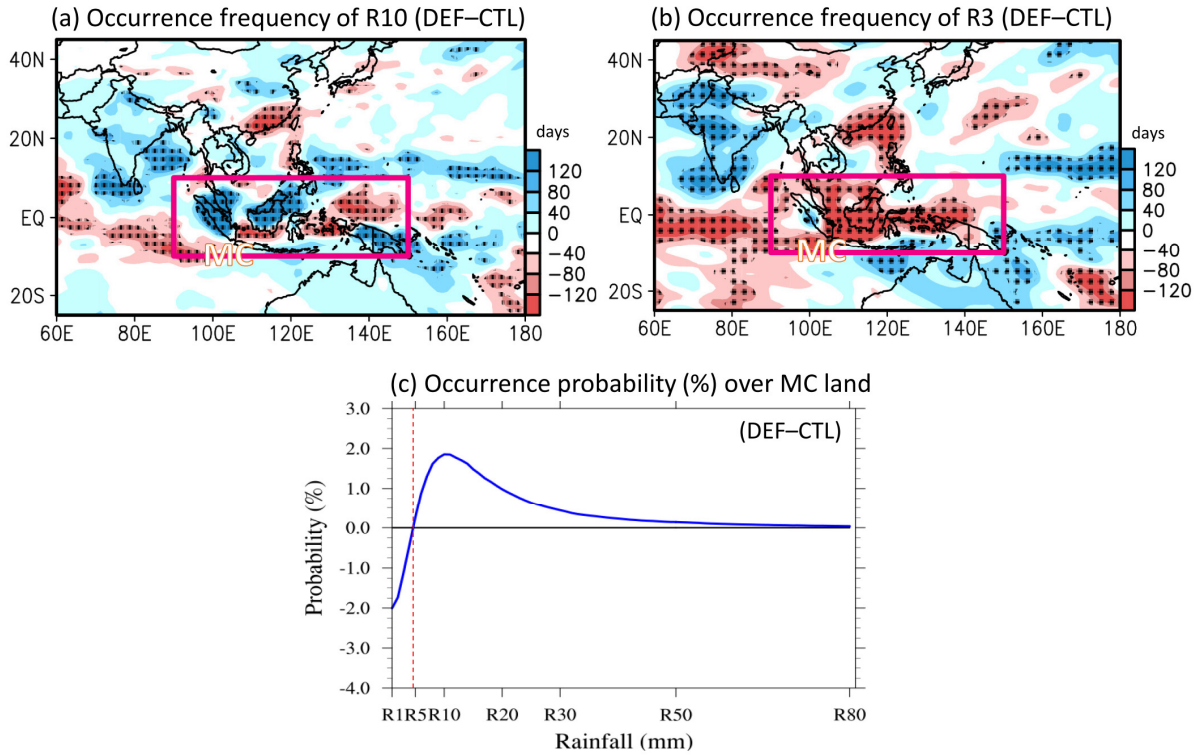
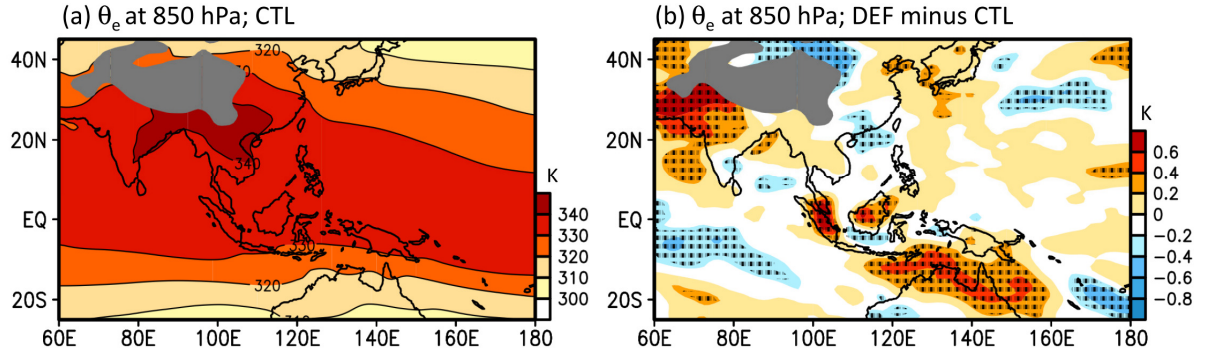


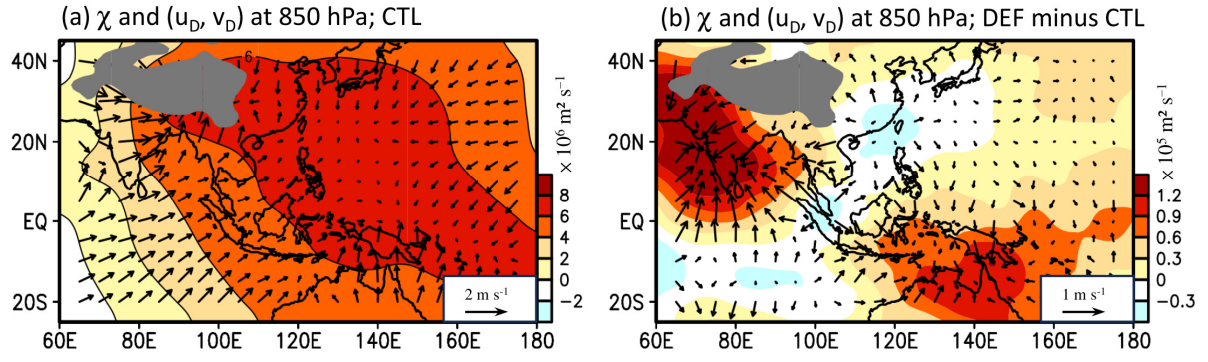
## Supplementary Information



**Fig. S1.** Threshold-dependent precipitation occurrence responses (DEF-CTL), with DEF representing the deforestation run and CTL the control run. **(a)** Spatial distribution of changes in R10mm occurrence frequency (days with rainfall  $\geq 10$  mm day $^{-1}$ ). **(b)** As in (a), but for changes in R3 occurrence frequency (days  $\geq 3$  mm day $^{-1}$ ), which lies within the same regime as R1 (days  $\geq 1$  mm day $^{-1}$ ) in panel (c); supporting the robustness of the precipitation-frequency response at low-to-moderate thresholds. In (a) and (b), stippling indicates regions where differences are statistically significant at the 90% confidence level, and the pink box denotes the Maritime Continent (MC) region. **(c)** Changes in occurrence probability (%) over MC land as a function of precipitation threshold, ranking from R1 to R80 (days  $\geq 80$  mm day $^{-1}$ ). The red dashed line marks R5 (days  $\geq 5$  mm day $^{-1}$ ), where the response transitions from negative (reduced frequency) to positive (enhanced frequency).



**Fig. S2.** Spatial distributions of equivalent potential temperature ( $\theta_e$ ) at 850 hPa for (a) the CTL run, and (b) the difference between the DEF and the CTL. In (b), stippling indicates regions where differences are statistically significant at the 90% confidence level.



**Fig. S3.** Spatial distributions of low-level velocity potential ( $\chi$ ) at 850 hPa (shading) superimposed with the corresponding divergent wind vectors: **(a)** the CTL run and **(b)** the difference between DEF and CTL.