

## Supplementary Material

Selection of the wettest and driest five years from a teak tree ring  $\delta^{18}\text{O}$  record between 1950 and 2015 CE (Pumijumnong et al. 2020).

The tree ring  $\delta^{18}\text{O}$  data between 1950 and 2015 CE were normalized to have a mean of 0 and a unit variance (converted to z-score). The wettest and driest five years were then selected and are shown below. Note that tree ring  $\delta^{18}\text{O}$  is inversely correlated with the amount of precipitation.

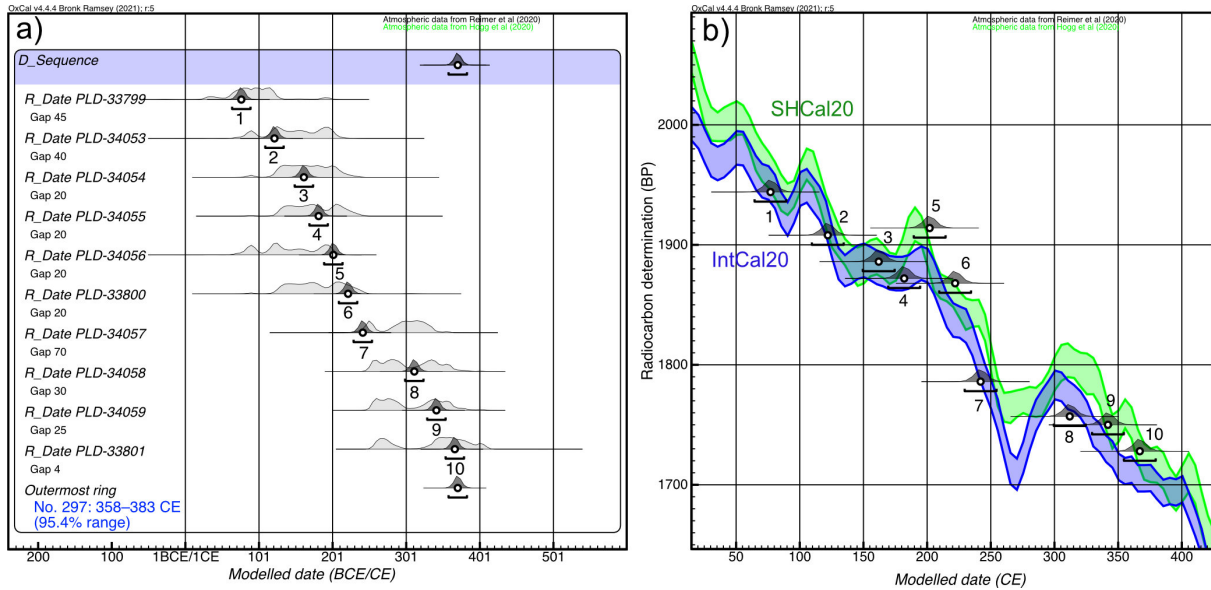
### Wettest five years

Rank	Year	$\delta^{18}\text{O}$ (‰)	Z-score
1st	1973	22.60	-2.52
2nd	1975	22.86	-2.19
3rd	1970	23.02	-1.99
4th	2010	23.32	-1.61
5th	1959	23.50	-1.39

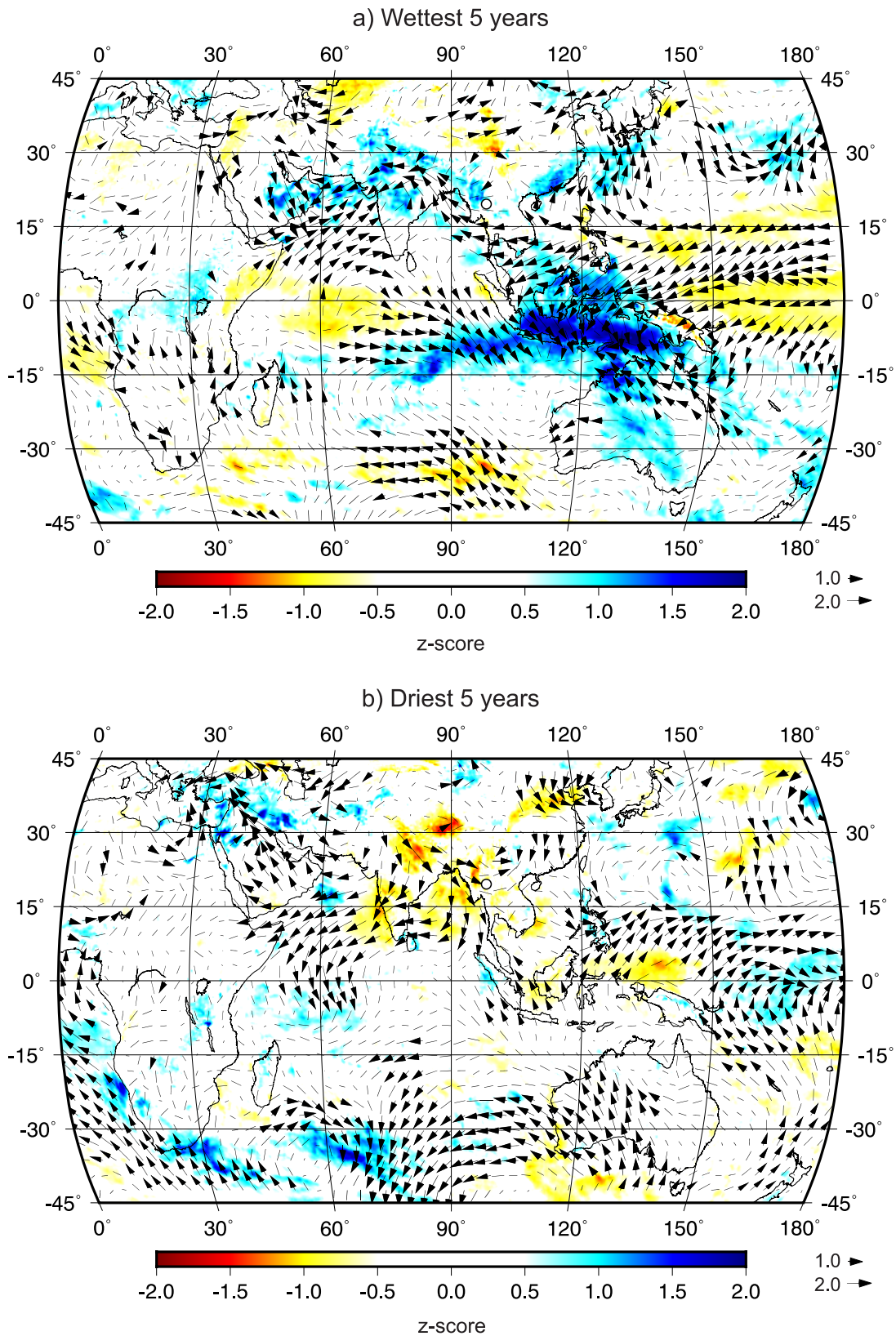
### Driest five years

Rank	Year	$\delta^{18}\text{O}$ (‰)	Z-score
1st	2015	26.90	2.90
2nd	2014	26.21	2.03
3rd	1986	26.17	1.98
4th	2012	26.10	1.90
5th	1979	25.90	1.64

Pumijumnong N, Bräuning A, Sano M, Nakatsuka T, Muangsong C, Buajan S. 2020. A 338-year tree-ring oxygen isotope record from Thai teak captures the variations in the Asian summer monsoon system. *Scientific Reports* 10:8966.



**Supplementary Figure 1.** (a) Radiocarbon dates based on a mixed calibration curve evenly weighted from the IntCal20 and SHCal20 curves. Probability distribution of the calibration without wiggle matching (light gray) and wiggle-matched model (dark gray, with 95.4% probability range at the bottom) are shown. The outermost ring (Relative year 297) falls in the range of 358–383 CE (95.4% probability) based on the wiggle-matching calibration. (b) The wiggle-matched dates on the IntCal20 and SHCal20 curves with 95.4% probability range (26-year bar) at the bottom.



**Supplementary Figure 2.** Normalized May–October composite anomalies of global precipitation (color shading) and surface wind (arrows) for the (a) wettest and (b) driest five years between 1950 and 2019. Open circle indicates our sampling site (see Figure. 6 for regional-scale plots).