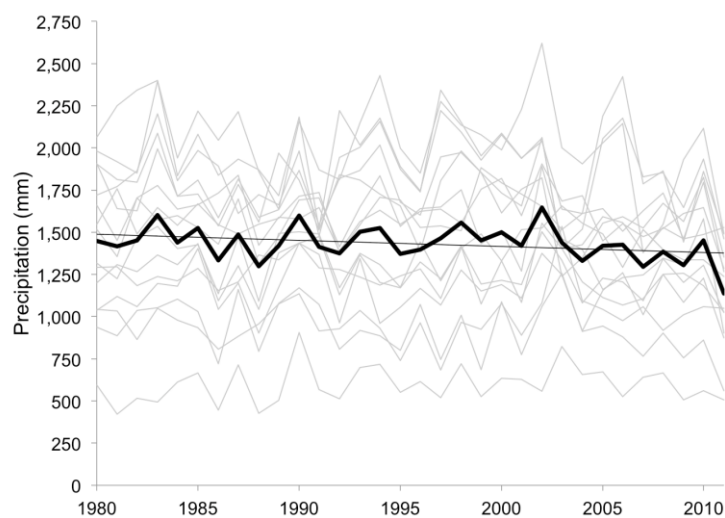


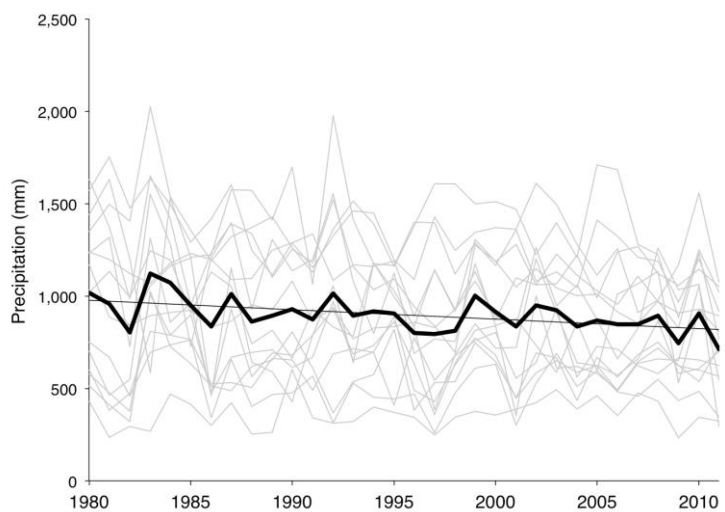
## Supplementary Materials: Association between Empirically Estimated Monsoon Dynamics and Other Weather Factors and Historical Tea Yields in China: Results from a Yield Response Model

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Figure S1 shows the total annual precipitation for each province and total provincial average annual precipitation over the study period. We find that the negative trend in the average total precipitation is not statistically significant at the 5 percent level ( $p = 0.153$ ). Figure S2 shows total provincial precipitation occurring during the monsoon. This negative trend in rainfall is consistent with previous findings reported in Ahmed et al. 2014 and we find it to be statistically significant ( $p = 0.004$ ).

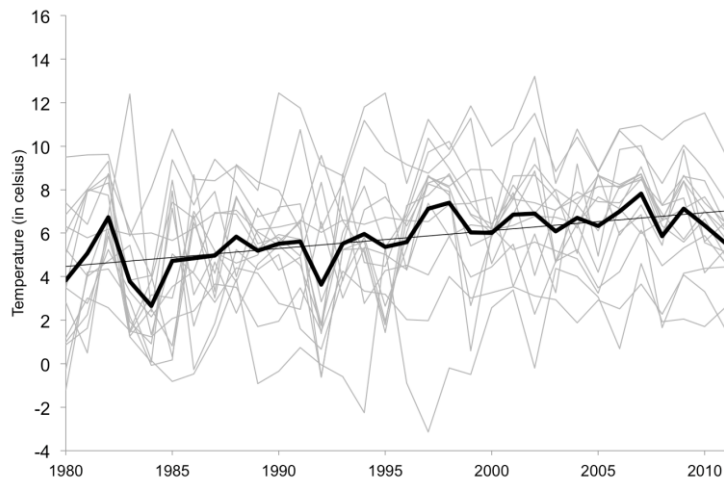


**Figure S1** This graph shows total annual precipitation for each province (grey lines) and the average annual precipitation among the 15 tea producing provinces (black line) for each year from 1980 to 2011.

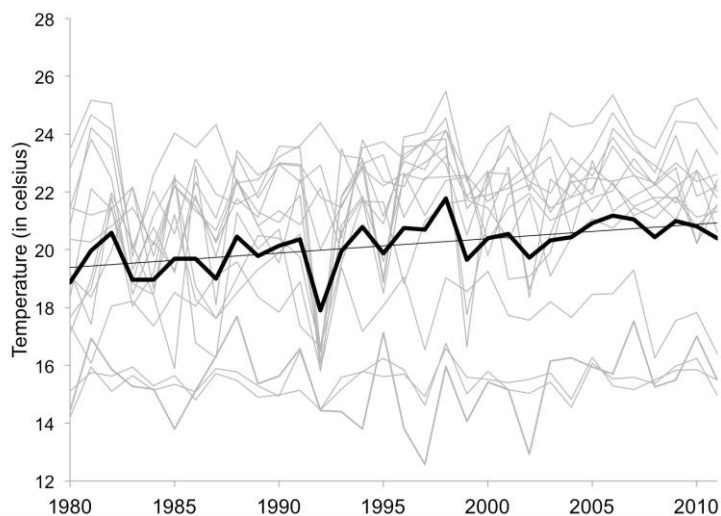


**Figure S2** This graph shows the mean total monsoon precipitation for all provinces (black line) and the total monsoon precipitation for each of the 15 tea producing provinces in China (grey lines).

Trends in average daily minimum temperatures during the pre-monsoon and monsoon periods from 1980 to 2010 are illustrated in Figures S3 and S4. We find that the time trend on pre-monsoon average daily minimum temperatures is positive and statistically significant ( $p=0.000$ ) while the same trend on average daily minimum temperatures during the monsoon is also positive and statistically significant ( $p = 0.002$ ).



**Figure S3** The grey lines on this graph indicate the province-specific average daily minimum temperature during the pre-monsoon period. The black line indicates average daily minimum temperature across all 15 tea producing provinces.



**Figure S4** This graph shows the annual average daily minimum temperature during the monsoon period across the 15 producing provinces. The grey lines indicate the average minimum daily temperature for each province and the black line indicates the province average daily minimum temperature.

