

## Assessment of Sungkai tree-ring $\delta^{18}\text{O}$ proxy for paleoclimate reconstruction

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We measured annual  $\delta^{18}\text{O}$  variations of two sungkai trees that were collected in the same area as previous study, in order to assess the reproducibility of sungkai  $\delta^{18}\text{O}$  as paleoclimate proxies. Two sungkai  $\delta^{18}\text{O}$  variations has a significant correlation ( $r = 0.80$ ;  $P < 0.001$ ) with each other and also with the previous analysis, suggesting that  $\delta^{18}\text{O}$  values of sungkai are affected by external climatic factors. The annual  $\delta^{18}\text{O}$  of SungkaiNAN7 has significant, positive correlations with temperature, sunlight hours and air pressure whereas it has significant, negative correlations with relative humidity and SOI. Moreover, the seasonal  $\delta^{18}\text{O}$  variation acquired during severe drought of 1997-98 El Nino event shows that the maximum  $\delta^{18}\text{O}$  value around 1997 latewood corresponds to rainfall/relative humidity minimum and temperature/sunlight hours/air pressure maximum with a significant time lag.

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