

Interactive comment on “Response of *Pinus sylvestris* var. *mongolica* to water change and the reconstruction of drought history for the past 260 years in northeast China” by Liangjun Zhu et al.

Anonymous Referee #1

Received and published: 30 April 2018

This manuscript presented 260-year PDSI reconstruction based on tree-ring record in the central Daxing'an Mountains, NE China. It is a necessary supplement of past climate proxy records in this area, especially for the annual drought reconstruction and its implication for different drought patterns in recent at the Daxing'an Mountains and Mongolian Plateaus (mild drier), NE Asia. Overall this manuscript is well-written, the work seems to be of high quality and is appropriate for Climate of the Past. Therefore, I would recommend this manuscript for publication in this Journal after the following issues are addressed.

1. The manuscript will benefit from a last check by a native speaker. However, read-

C1

ability will improve quite a lot following the careful language check done by reviewer 1. 2. The study shows the drought history of Daxing'an Mountains associated with the Pacific and Atlantic Ocean oscillations, while in the discussion section you linked both PDO and AMO to the Asia Monsoon. Is the PDO or AMO modifying the Asia Monsoon or the Asia Monsoon modifying the PDO? Please check it. 3. In discussion section, the author thinks both the PDO and AMO have the potential to drive or affect the Asian monsoon, which could affect the drought of NE China. Could you give some evidence to prove the Asia Monsoon influence the drought. It's better for you to give some evidence of climate dynamics to prove the mechanism. 4. From the abstract and conclusion, the readers may feel this tree-ring-based PDSI reconstruction is about the whole region of Daxing'an Mountains, NE China. In fact, it's just a single site PDSI reconstruction. I suggest authors revise it, and specific the study area. For example, just use the central Daxing'an Mountains. 5. In figure 9a, the low frequency MADA series looks not match with its high frequency series. Please check it. 6. It's hard to see the reconstruction point (red) in figure 6, please use different color. 7. Seven tables and twelve figures in your MS, it's too many, some of them could be put in the supplementary materials but in the text. 8. For the mean correlation coefficient between all tree-ring series, use RBAR (in figure 3 and the text) or Rbar (in table 2), please keep it consistent. 9. For the statistic coefficient of correlation, use "R" or "r", please keep it consistent. 10. References in text of the manuscript should be listed in chronological order. 11. Line 48: delete "Therefore". 12. Line 214: replace "A" with "The". 13. Line 261: replace "∴ The" with "∴ the". 14. Line 273: delete "transitional". 15. Line 282: replace "by large-scale climate oscillation of the ENSO" with "by ENSO".

Interactive comment on Clim. Past Discuss., https://doi.org/10.5194/cp-2018-31, 2018.

C2