The PAGES Data Stewardship Integrative Activity seeks to advance best practices for sharing data generated and assembled as part of all PAGES-related activities. As part of this activity, a team of reviewers has been constituted for the “Climate of the Past 2000 years” Special Issue. The data team is reviewing the data handling within each of the CP-Discussion papers in relation to the CP data policy and current best practices. The team has identified essential and recommended additions for each paper, with the goal of achieving a high and consistent level of data stewardship across the 2k Special Issue. We recognize that an additional effort will likely be required to meet the high level of data stewardship envisaged, and we appreciate dedication and contribution of the authors. This includes the use of Data Citations (see example in supplement). We ask authors to respond to our comments as part of the regular open interactive discussion. If you have any questions about PAGES Data Stewardship principles, please contact any of us directly.

Best wishes for the success of your paper,
2k Special Issue Data Review Team (Darrell Kaufman, Nerilie Abram, Belen Martrat, Raphael Neukom, Scott St. George) and ex-officio team members (Marie-France Loutre, Lucien von Gunten)

(1) Add a "data availability" section that describes where the data can be accessed, including a Data Citation for the new data generated in this study (see below).

**Answer:** Five tree ring cellulose oxygen isotopes chronologies in this manuscript were not in a public repository, except for the data from Bhutan (available at DOI: 10.1002/jgrd.50664). This manuscript including two newly developed tree ring cellulose oxygen isotopes chronologies (JG and Ganesh) and another manuscript (Sano et al., submitted) including one tree ring cellulose oxygen isotopes chronology (Manali), which is also used in this manuscript, are still under review. Usually, these data should be open after the process of peer review. Therefore, we plan to contribute the data to NOAA Paleoclimatology Datasets (https://www.ncdc.noaa.gov/data-access/paleoclimatology-data) after both the manuscripts are published. We have added the description on the data availability in the Acknowledgments (red parts).

**Acknowledgments:**
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data in this paper are available from the authors upon request (cxxu@mail.iggcas.ac.cn and msano@aoni.waseda.jp) and NOAA Paleoclimatology Datasets (https://www.ncdc.noaa.gov/data-access/paleoclimatology-data). We deeply appreciate the helpful comments from three anonymous reviewers and the group members of SPATIAL laboratory at the University of Utah to improve the manuscript.

(2) Add Data Citations for each of the five datasets listed in Table 1, including both the previously published data, and the new data from this study. Note that the publication citation for record #3 is incorrect; a journal issue was assigned in 2012 (not 2011; doi:10.1177/0959683611430338).

**Answer:** Thanks for your suggestions. We have modified the Table 1 according to the suggestions.

Table 1. Tree ring cellulose oxygen isotope data sets used in this study

<table>
<thead>
<tr>
<th>No.</th>
<th>Sample ID</th>
<th>Location</th>
<th>Period</th>
<th>Tree species</th>
<th>Mean</th>
<th>Climatic response of tree ring δ¹⁸O</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manali</td>
<td>32°13′N, 77°13′E, 2700 masl, India</td>
<td>1768-2</td>
<td>Abies pindrow</td>
<td>29.97‰</td>
<td>Regional JJAS PDSI ( r = -0.67 )</td>
<td>Sano et al., submitted</td>
</tr>
<tr>
<td>2</td>
<td>JG</td>
<td>29°38′N, 79°51′E, 3849 masl, India</td>
<td>1641-2</td>
<td>Cedrus deodara</td>
<td>30.39‰</td>
<td>Regional JJAS PDSI ( r = -0.50 )</td>
<td>This study</td>
</tr>
<tr>
<td>3</td>
<td>Hulma</td>
<td>29°51′N, 81°56′E, 3850 masl, Nepal</td>
<td>1778-2</td>
<td>Abies spectabilis</td>
<td>25.94‰</td>
<td>Regional JJAS PDSI ( r = -0.73 )</td>
<td>Sano et al., 2012</td>
</tr>
<tr>
<td>4</td>
<td>Ganesh</td>
<td>28°10′N, 85°11′E, 3550 masl, Nepal</td>
<td>1801-2</td>
<td>Abies spectabilis</td>
<td>23.01‰</td>
<td>Regional JJAS PDSI ( r = -0.55 )</td>
<td>This study</td>
</tr>
<tr>
<td>5</td>
<td>Wache</td>
<td>27°59′N, 90°00′E, 3500 masl, Bhutan</td>
<td>1743-2</td>
<td>Larix griffithii</td>
<td>19.38‰</td>
<td>Regional JJAS PDSI ( r = -0.59 )</td>
<td>Sano et al., 2013</td>
</tr>
</tbody>
</table>

(3) Add a note to explain that the spelling of the site name used in the previous paper is “Julma” rather than “Hulma” as it appears in the current paper.

**Answer:** In the previous paper (Sano et al., 2012), Hulma is the name for sampling site, while Julma is the name of meteorological station.

(4) For those data not already in a public repository, submit essential metadata along with the time series shown in Figs 2a, 3a, and 4a, plus the averaged time series (H5) in Fig 4b, and its smoothed versions (Fig 10 (red) and Fig 11b (red)).

**Answer:** Metadata may be helpful for published data. For the unpublished data, Table 1 provided similar information (name, location, length, climate implication, data source, etc) with metadata. Anyway, we plan to submit the data to NOAA after the manuscript was published, it will contain necessary information.
Recommended additions:

(1) Add Data Citations for each time series used to compare with the 18O tree-ring time series, including: Fig 5a (Indian rainfall); Fig 5b (Indian Monsoon); Fig 9 (ENSO from McGregor and Wilson); Fig 10 (Stalagmite 18O); Fig 11 (Tibetan temperature and Indian Ocean SST)

**Answer:** We have added the data citations for these records. Please see the following part.


Tierney, J., Abram, N., Anchukaitis, K., Evans, M., Cyril, G., Halimeda, K., and Saenger, C., PAGES Ocean2K 400 Year Coral Data and Tropical SST Reconstructions, World Data Center for Paleoclimatology, [https://www.ncdc.noaa.gov/paleo-search/study/17955](https://www.ncdc.noaa.gov/paleo-search/study/17955), 2015.


(2) Submit for archival: (a) the correlation time series in Fig 9 and (b) the land-sea thermal contrast time series in Fig 11b (black).
**Answer:** The data are easily calculated using raw data of five tree ring cellulose oxygen isotope chronologies and other data in public repository. After we contribute tree ring oxygen isotope data to a public repository, other researchers can reproduce the data based on their own interests.