



Supplement of

The PAGES CoralHydro2k Seawater $\delta^{18}\text{O}$ Database: a FAIR-aligned compilation of seawater $\delta^{18}\text{O}$ data to uncover “hidden” insights from the global ocean

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Data Use Policies

S1. British Oceanographic Data Centre

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<https://www.bodc.ac.uk/data/documents/nodb/599476/>.

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S2. GEOTRACES Fair Use Data Policy

The statement below was copied from <https://www.geotraces.org/idp2021-fair-use-document/>.

Fair Data Use Statement for GEOTRACES IDP2021 version 2

The GEOTRACES 2021 Intermediate Data Product version 2 (IDP2021v2) is the result of immense effort by field and laboratory scientists, data providers and data managers. It is important that users of the IDP2021v2 fairly acknowledge this effort. In doing so, the effort made by everyone involved in the project will be acknowledged publicly and help to promote widespread use and sharing of data. The potential benefits for IDP users from engaging with the GEOTRACES data generators is highlighted.

We recommend that users of the IDP2021v2 will:

- 1) Generously acknowledge the contributions of GEOTRACES investigators and data providers in the form of (i) invitation to co-authorship, (ii) reference to relevant

scientific articles and/or data DOIs from data providers, or (iii) by naming data providers in the acknowledgements. Some specific examples are provided below.

2) Cite the GEOTRACES Intermediate Data Product (IDP2021) using the DOI if the data sets are used in a presentation or publication. This should be of the form: GEOTRACES Intermediate Data Product Group (2021). The GEOTRACES Intermediate Data Product 2021 version 2 (IDP2021v2). NERC EDS British Oceanographic Data Centre NOC. doi:10.5285/ff46f034-f47c-05f9-e053-6c86abc0dc7e

3) Include in the acknowledgements:

“The GEOTRACES 2021 Intermediate Data Product version 2 (IDP2021v2) represents an international collaboration and is endorsed by the Scientific Committee on Oceanic Research (SCOR). The many researchers and funding agencies responsible for the collection of data and quality control are thanked for their contributions to the IDP2021v2.”

4) Report problems with the IDP2021v2 to ipo@geotraces.org

5) Report publications in which GEOTRACES data are used to ipo@geotraces.org or, if registered, use the GEOTRACES Data for Oceanic Research (DOoR) portal to report publications from their own IDP data: <https://geotraces-portal.sedoo.fr/pi>

S3. GLODAPV2 Fair Use Data Policy

The statement below was copied from <https://glodap.info/index.php/fair-data-use-statement/>.

The GLODAPv2 Citation

GLODAPv2 is described in two publications in Earth System Science Data ([Olsen et al., 2016](#) and [Lauvset et al., 2016](#)) and in one NDP document ([Key et al., 2015](#)). The NDP is a brief summary of the two ESSD papers. Full citations are provided below.

Whenever GLODAPv2 is used, the following citations must be included:

- For data and data product: Olsen et al., 2016 and Key et al., 2015
- For mapped product: Lauvset et al., 2016 and Key et al., 2015

Citing the Earth System Science Data publications is essential as this gives the team traceable citations and also enables tracking of GLODAPv2 use. This is important for justifying and sustaining the effort.

Citations

Olsen, A., R. M. Key, S. van Heuven, S. K. Lauvset, A. Velo, X. Lin, C. Schirnack, A. Kozyr, T. Tanhua, M. Hoppema, S. Jutterström, R. Steinfeldt, E. Jeansson, M. Ishii, F. F. Pérez and T. Suzuki. The Global Ocean Data Analysis Project version 2 (GLODAPv2) – an internally consistent data product for the world ocean, Earth Syst. Sci. Data, 8, 297–323, 2016, [doi:10.5194/essd-8-297-2016](https://doi.org/10.5194/essd-8-297-2016)

Lauvset, S. K, R. M. Key, A. Olsen, S. van Heuven, A. Velo, X. Lin, C. Schirnack, A. Kozyr, T. Tanhua, M. Hoppema, S. Jutterström, R. Steinfeldt, E. Jeansson, M. Ishii, F. F. Pérez, T. Suzuki and S. Watelet. A new global interior ocean mapped climatology: the 1°x1° GLODAP version 2, Earth Syst. Sci. Data, 8, 325–340, 2016, [doi:10.5194/essd-8-325-2016](https://doi.org/10.5194/essd-8-325-2016)

Key, R.M., A. Olsen, S. van Heuven, S. K. Lauvset, A. Velo, X. Lin, C. Schirnack, A. Kozyr, T. Tanhua, M. Hoppema, S. Jutterström, R. Steinfeldt, E. Jeansson, M. Ishii, F. F. Perez, and T. Suzuki. 2015. Global Ocean Data Analysis Project, Version 2 (GLODAPv2), ORNL/CDIAC-162, NDP-093. Carbon Dioxide Laboratory, US Department of Energy, Oak Ridge, Tennessee. [doi:10.3334/CDIAC/OTG.NDP093_GLODAPv2](https://doi.org/10.3334/CDIAC/OTG.NDP093_GLODAPv2)

For investigations that rely on a particular (set of) cruise(s), recognize the contribution of GLODAP data contributors by at least citing both the cruise DOI and any articles where the data are described, as well as, preferably, contacting principal investigators to explore opportunities for collaboration and co-authorship. To this end, DOIs are provided in the product files, as well

as relevant articles and principal investigator names in the cruise summary table. Contacting principal investigators comes with the additional benefit that the principal investigators often possess expert insight into the data and/or specific region under investigation. This can improve scientific quality and promote data sharing.

S4. Waterisotopes Database Data Use Policy

The statement below was copied from:

https://wateriso.utah.edu/waterisotopes/pages/spatial_db/data_use.html.

Data in the Waterisotopes Database are compiled from a range of public domain and private sources as a resource to support the research community. Most contributors have agreed to allow download and reuse of their data on the condition that users appropriately attribute any data used. The following describes the terms of this reuse:

1. Data obtained from the Waterisotope Database may be used freely for non-commercial research and education activities so long as the attribution guidelines given below (#2 and 3) are followed. Some data contributors have specific prohibitions against commercial use of data available through the Database; prior to commercial use the data policies of individual sources must be consulted and any necessary permissions obtained.
2. In order to assure traceability, any presentation, report, or publication that uses data downloaded from the database should cite <http://waterisotopes.org> as the immediate data source and include the date(s) of data access and the site name and/or query values used to obtain the data. For example: Waterisotopes Database (2017) <http://waterisotopesDB.org>. Accessed 2/25/2017. Query: Country=ZA, Type=Tap.
3. The ultimate source of all data in the database is documented and available to the user upon download. For single sites, this information is accessed by clicking on the 'project number' shown for that data and site. For multi-site downloads, the data package provided includes a table containing provenance information for the downloaded data. Literature citations are provided for data associated with a published work, and contact information for data contributors is provided where available.
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by providing additional contextual information facilitating the use of the isotopic data, the researchers using the data are encouraged to offer to engage the data contributor as a collaborator in their project.

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5. Although the database managers strive to ensure the accuracy and completeness of information in the Waterisotopes Database, all data are provided as is without guarantee. In some cases data contributors may have more complete or up-to-date data collections that they are willing to share directly with other researchers or collaborators. The SPATIAL team welcomes reports of suspected inaccuracies or data quality issues and will do our best to resolve any such issues as they are brought to our attention.
6. Any questions or comments regarding the appropriate use of data from the Waterisotopes Database should be directed to Gabe Bowen (gabe.bowen@utah.edu). We appreciate receiving copies of any work making use of data obtained from the database.