

Interactive comment on “A database of marine and terrestrial radiogenic Nd and Sr isotopes for tracing earth-surface processes” by Cécile L. Blanchet

Cecile Blanchet

blanchet@gfz-potsdam.de

Received and published: 18 April 2019

The author is grateful to referee #2 for a supportive and constructive review. The comments provided by this reviewer have been largely implemented in the revised version of the manuscript.

Major Comments: “The title of the manuscript, as well as the GFZ data management service at <http://doi.org/10.5880/GFZ.5.2.2018.001> (Blanchet 2018c), imply that the author is presenting a global Nd-Sr dataset for marine and terrestrial archives. However, in the text (e.g. Page 3 Line 4 and Line 24) the criteria for the region revealed as Africa, Europe, Mediterranean, and Atlantic. I highly recommend modifying the title so

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one can clearly relate to the dataset presented in the manuscript. Although the author stated that the criteria for the regions in the dataset set for Africa, Europe, Mediterranean, and Atlantic but Table 4 and Figure 1 contain samples from Indian Ocean, Asia and Caspian Sea. If this dataset meant to represent the Nd-Sr isotopic signature of marine and terrestrial samples in a global scales then it should contain other well-established records from the Middle East, Atlantic, Arctic, Asia, Australia, and Antarctica, see the list below for example. If the author, at this stage, is mainly focused on Mediterranean, Africa and Europe regions then she needs to elaborate more on the rationale behind selecting these regions.”

Response: Similarly to M.D. Krom, Referee #2 requested to modify the title of the manuscript and the database to reflect the Mediterranean extend of the submitted dataset. This reviewer also advised to add datapoints from several publications in order to reach a global geographical extend. Together with many other datapoints obtain from own literature search, which now provide a global extend to the database, we have added most of the references proposed by Referee #2 in the second iteration of the database (accessible at <http://doi.org/10.5880/GFZ.4.3.2019.001>). Only two of these references were not added because: i) the dataset is a seasonal record of dust deposition and the variability will not be preserved in the database (as the datapoints are average for a similar location) (Bory et al., 2002), ii) the samples are of pre-LGM age (Chen and Li, 2013). The author is grateful to Reviewer #2 for providing these references, which are a valuable addition to the database. Due to the now larger geographical reach of the database and the clearly stated intention to increase the spatial resolution at global scale, it is here proposed to keep the titles as submitted.

New maps showing the growing number of data points now appear in Fig. 1 and explanations have been added to the text to reflect the process. Data input relative to the second iteration is described in section 2.1 and in table 1.

Minor Comments:

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Page 1, line 19: parenthesis added before “Region”.

Page 2, line 15: This sentence has been modified and reads now: “(. . .) but has been put on hold since 2013 and is therefore not up-to-date”.

Page 3, line 11: Citation from Bouvier et al., 2008 and Jacobsen and Wasserburg (1980) have been added for the CHUR value of Nd isotopes.

Comment: “Page 3, line 28, Page 6, line 24, Table 4, Figure 1 and Figure 3: Change bivalve to freshwater Mollusk as defined by Osborn et al. (2008).”

Response: The term “bivalve” has been kept instead of “freshwater mollusk” since bivalves encompass freshwater mollusks and is a more generic term, that will permit to integrate marine mollusks in the future.

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2018-109>, 2018.