

Dear Dr. Carlson,

**Public justification (visible to the public if the article is accepted and published):**

Intensely valuable data product and description; thank you for using ESSD.

Thank you, we are glad that this dataset and description are viewed as valuable. We have addressed the minor changes below (with text changes underlined). Our responses are shown in blue.

Please add minor changes as follows:

A few remaining typos. Proofreaders should catch most of these. Suggest that, from group of authors, at least two carefully read proofs to ensure all corrections.

We have checked for typos and will do so again for the proofs.

Missing new section 8 in manuscript summary around lines 80-85?

Added to manuscript summary:

“Section 6 gives a description of the dataset, Sect. 7 shows the characteristics of the dataset, Sect. 8 demonstrates how these data can be compared with national inventories and Sect. 9 discusses current limitations and future directions.”

I think you did not define NIES (e.g. line 305 and following)? That particular acronym in this usage might have two meanings?

Added definition:

“...measurements on National Institute for Environmental Studies (NIES) ships...”

Helpful informative data-source landing page, referenced at line 555 and again at line 905. ESSD will want the same link at end of abstract.

Added to the abstract:

These flux and stock change estimates are reported annually (2015–2020) as both a global 1° × 1° gridded dataset and as a country-level dataset and are available for download from the Committee on Earth Observation Satellites’ (CEOS) website: <https://doi.org/10.48588/npf6-sw92>.