

Ms. Ref. No. Essd-2020-96 “Diets of the Barents Sea cod from the 1930s to the present day” by Bryony L. Townhill, Rebecca E. Holt, Bjarte Bogstad, Joël M. Durant, John K. Pinnegar, Andrey V. Dolgov, Natalia A. Yaragina, Edda Johannesen, Geir Ottersen. <https://doi.org/10.5194/essd-2020-96>

General comments

The manuscript by Townhill et al. describes a unique time series of Barents Sea cod diet data stretching from 1930 to 2018. This is a great source of information and in this manuscript, the data is presented to the scientific community and the public in general. The data sources are described, the applicability and usefulness and some results are presented and discussed. The data set and this manuscript are of great interest to the public and should be considered for publication. However, the authors should spend a little more time on presenting the data overviews, so that the reader gets more information about the data set without going into the analysis of the data.

- In general, an overview table presenting the data sources, years, number of stomachs etc. would be very helpful. For example:

| Source | Years | Total no. of stomachs | No. by quarter | % empty stomachs (or absolute) | Area (either ICES or „natural“ e.g. Svalbard, Bear Island etc. | Comments – pooled data, single stomachs | Etc. |
|--------|-----------|-----------------------|----------------|--------------------------------|--|---|------|
| UK | 1930-1964 | XY | | | | | |
| ... | | | | | | | |
| .. | | | | | | | |

- The sampling coverage is presented by quarter. It would be very nice to have at least figure 5 (eventually also for selected prey species/categories in figure 6) for each decade split up by quarter.
- The authors should avoid stating “The location of each stomach sample is shown in Figure 1”, but state what can be seen or deduced from the data and then refer to the figure in parentheses. This applies to the entire document.

Specific comments

L1: Title – Reading this title, one question comes to my mind immediately. Will you update this data set regularly? If not, then phrasing “...to the present day” could be a bit misleading, let us say in 10 years of time. So maybe, just indicating the latest year of data (2018) is more appropriate. However, this is just a recommendation. And maybe I am old fashioned, but in my opinion you should have the Latin name of cod in the title.

L39: “conducted“ sounds better than “done“

L70: “As part of the merging process, the data underwent a thorough quality control.“ Either you should refer to a publication specifying this quality control or you have to describe this in the data and methodology section.

L75/76: Please add a few sentences elaborating why understanding trophic interactions in marine ecosystems is important -> e.g. multi-species assessments.

L142: “For items that can be identified, lengths are recorded, ...“ – I assume that you refer to “For items that can be identified *and were assessed as being intact (digestion grade 1, eventually 2)*, lengths are recorded,...“, because it is possible to identify stomach items, based on fragments, where no length measurement is possible.

L152/153: Does this sentence mean that the missing Russian data for years 1947-1983 will be digitized and added to the data set. Based on the Russian data policy most probably not, but I am just curious if they will become available in the future.

L223: “were“ instead of „are“

Figure 2: In the two lower graphs, the factors “ $\times 10^5$ “ and “ $\times 10^4$ “ should be placed somewhere else, e.g. “No. of stomachs with food ($\times 10^5$)“

Supplementary material 2: In the first paragraph, the authors describe the presented table and refer to the column numbers, e.g. “predator information (columns 1-12)“. For convenience it would be nice if you could add one column on the left hand side of the “Column name“, so that the reader can find the different columns more easily.

| Column No. | Column Name | Information | Units |
|------------|-------------|---|-------|
| 1 | Data_ID | Details whether the data is from either the IMR-PINRO joint database or CEFAS | - |
| 2 | Ser_No Fish | Serial number for each individual fish | - |
| 3 | Country | Country code denoting either: 58: Norway (IMR-PINRO Database) U.K: CEFAS Data | - |
| 4 | Ship_code | Ship identification code | - |
| ... | Year | | |