Supplement of Earth Syst. Sci. Data, 12, 2447–2457, 2020 https://doi.org/10.5194/essd-12-2447-2020-supplement © Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.





## Supplement of

## A volumetric census of the Barents Sea in a changing climate

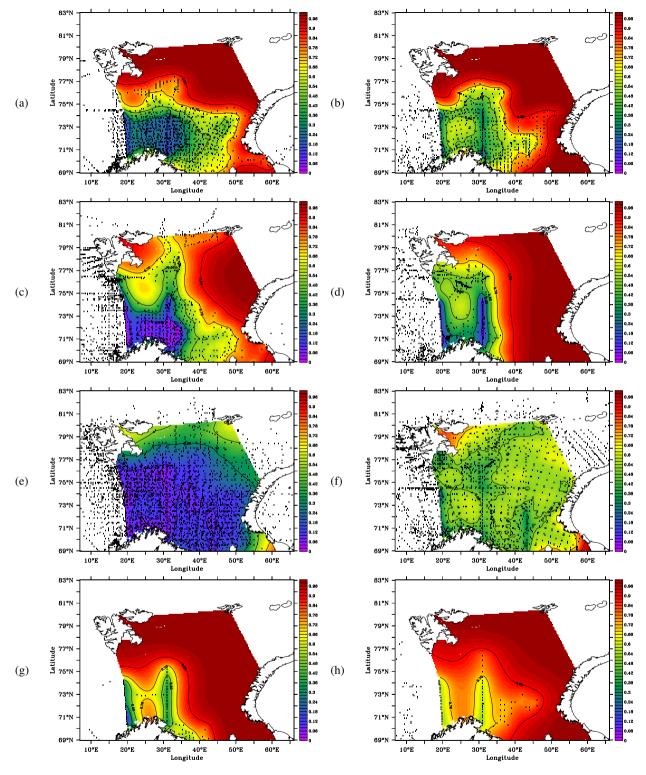
Sylvain Watelet et al.

Correspondence to: Sylvain Watelet (swatelet@uliege.be)

The copyright of individual parts of the supplement might differ from the CC BY 4.0 License.

## S1 Most reliable period

Average relative error for salinity at the Barents Sea surface for the periods 1994-1998 and 2006-2010 is shown in Fig. S1.



**Figure S1.** Average relative error for salinity at the Barents Sea surface between 1994–1998 (left column) and 2006–2010 (right column) between 1994–1998. (a) and (b) correspond to spring, (c) and (d) to summer, (e) and (f) to autumn, (g) and (h) to winter. This variable measures the added value brought by *in situ* data to the analysis: 0 would be the true field while 1 corresponds to an absence of data, that is an analysis equal to the first guess. The winter 1996–1997 was excluded from the computations due to a lack of data.

## S2 Most reliable area

Relative error fields are averaged by season in Fig. S2 and S3 for the most reliable area.

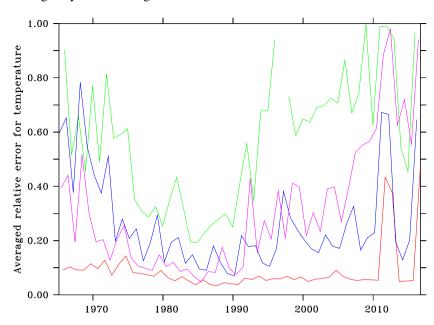
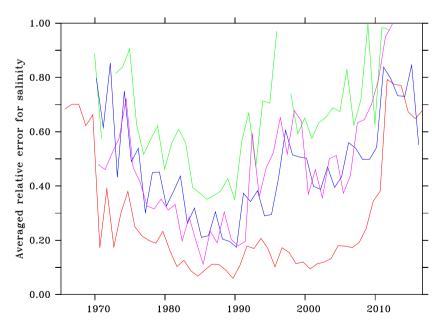


Figure S2. Average relative error on the most reliable area for temperature as a function of seasons: autumn (red), winter (green), spring (blue), summer (purple).



**Figure S3.** Average relative error on the most reliable area for salinity as a function of seasons: autumn (red), winter (green), spring (blue), summer (purple).