Earth Syst. Sci. Data Discuss., referee comment RC2
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Comment on essd-2021-47

Anonymous Referee #2

Referee comment on "An integrated marine data collection for the German Bight – Part 1: Subaqueous geomorphology and surface sedimentology (1996–2016)" by Julian Sievers et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2021-47-RC2, 2021

First of all, sorry for the late review. I got my deadlines mixed up. My apologies.

General Comments:
The paper is well structured and comprehensibly written and offers a good description of the dataset. The dataset itself is valuable and unique in its scope and completeness over time and space and can therefore be quite useful for different purposes like further morphological analyses or as input for numerical models as stated in the paper. A new approach for combining interpolations over space and time has been applied to bring together a large number of different surveys and samples into one coherent dataset.

The online presentation of the dataset is easy to use and well documented. The dataset presented in the paper seems to be completly available for direct download as well as for viewing online. The online functionalities and downloads I have tried worked without problem. One minor complaint, at least in the online map viewer, for some variables there were no units visible neither in the legend nor in the metadata (e.g. for the d50.).

I recommend the publication of this paper (with some minor adjustments).

Specific comments:
2.2
With regards to the temporal interpolation, the authors state that it is sufficient to only use the closest time points in both directions. Have the authors checked if using average changes or trends over a longer time period lead to different results when interpolating the data? If so it might be usefull to go a little bit further into detail here.
For example in wave dominated areas single extreme storm events can have effects on bathymetric changes that are much larger then during average years. Or the slow movement of large scale bedforms can be observed in bathymetric data while not necessarily indicative of long term erosion/deposition. Allthough these are mostly small scale effects and might not apply to large parts of the data domain, at least mentioning these aspects might help to put the dataset in context.

2.3
The part about the temporal availability of samples (L157-160) is somewhat hard to

understand/confusing. For example the authors write "all samples for the same point in time" while to my understanding mean something more like "samples for one point from different times" or even "utilizing all samples regardless of their respective date". This part should be made clearer.

3.3
I assume these products are for the whole period (1996-2016). This should be made clear here again.
Some additional explanation about the calculation of the morphological drive would be helpful. It is not obvious how it helps to differentiate between gradual and sudden changes. Especially since the unit of m per year could also be interpreted as average yearly changes.

Technical corrections (all concrete corrections are of course suggestions):
L 45: that for numerical models --> for use in numerical models

L 103: and a consequence --> and as a consequence

L 166: (see Sect. 2.3) --> I think this should be 2.4

L 213: was used 21 DTMs --> was used for 21 DTMs

L 229: isoline --> isolines

L 266: components --> components.