General comments

Janowski et al. provide a clear description of what appears to be a comprehensive seabed mapping dataset in the Southern Baltic. This is an exciting dataset, and the authors have achieved a high standard of accessibility by making all data open. I believe this is exactly what seabed mapping researchers should be doing to further the field given the great expense and effort required to collect such data, and as we collectively work towards regional and global mapping goals such as Seabed 2030.

The data itself seems to be generally of high quality and usefulness, but some exceptions should be acknowledged. From what I can tell from the manuscript, and from downloading a few samples, the MBES bathymetric data look to be of high quality and resolution – suitable for geomorphic, habitat or other analyses. The authors report that the MBES backscatter were not fully processed, foregoing angular compensation. This is really unfortunate, and limits the usefulness of such an important data source. I cannot understand why the backscatter data were not fully processed, as it seems the authors had access to the necessary tools to do so. If possible, I would encourage the authors to revisit the MBES backscatter at some point and try to update their dataset with an angular-compensated product. The SSS data look to be mostly high quality, but there are some obvious geometric errors that are not mentioned. In fact, the authors state that the SSS data are high quality and free of geometric errors, which is not quite true. See a specific example below.

Specific comments

Abstract. Not clear what the difference is between "detailed bathymetric grids at 50 x 50 cm resolution and sonar mosaics at 20 x 20 cm resolution" in the abstract. I believe "sonar mosaics" refers to side scan backscatter, but perhaps make this clear.

Table 1. I'm not sure what is meant by "Seldom MBES and SSS datasets…"

101-102 and onward. Suggest being consistent with use of abbreviations once they have been introduced throughout the manuscript (e.g., "MBES", "SSS").

Figure 1. The quality of this figure could be improved. The base map contains many labels that cannot be read. All labels with the individual survey sheets are too small to be read at normal page size. Legend entries do not need to be complete sentences and could be reduced for conciseness; for example, "The offshore wind energy area excluded from the hydroacoustic study" could just be "Excluded offshore wind area". This is explained previously in the text.

174-175. I am not sure what is meant by "The processing of bathymetric data included the elimination of acoustic noise and imaging of the seabed regarding mean sea level". Does imaging refer to backscatter? Consider rewording/rephrasing.

188. It is a shame that angular corrections were not applied to the MBES backscatter. This greatly reduces the utility of the data for other users. I'm not entirely clear on why this wasn't performed… both the QPS suite and BeamWorx contain functionality for angular correction as part of the backscatter processing, which takes no additional time. Why use proprietary software that cannot

perform a basic AVG correction? This seems like a major shortcoming.

Figure 5. Suggest adding some indication of the backscatter units here – maybe just in the caption. It looks to be possibly just signed 8-bit integer values? Some readers may be confused if expecting to see a dB representation. The use of signed integers and a divergent colour ramp is also a bit odd… This is a unipolar variable being mapped (i.e., low to high values). The convention would be a sequential colour scheme ranging from light to dark. A divergent palette makes it look like the negative and positives are meaningful (they are not).

Figure 5. We see the impact of foregoing the angular correction here. The usefulness of these data for any sort of quantitative analysis is greatly reduced.

253-255, 288-305. In these lines, I believe the quality of the SSS data may be overstated. It is stated that, "The final mosaics exhibited strong geometric correctness, with minimal distortion or artefacts, and high contrast, facilitating the discrimination of objects based on shape, size, and shadow". There are some very obvious geometric discrepancies though, with misalignment of features by at least 20 m (see Figure 1 below). This is not uncommon for sidescan data, but these limitations should really be acknowledged – these are not perfect datasets.
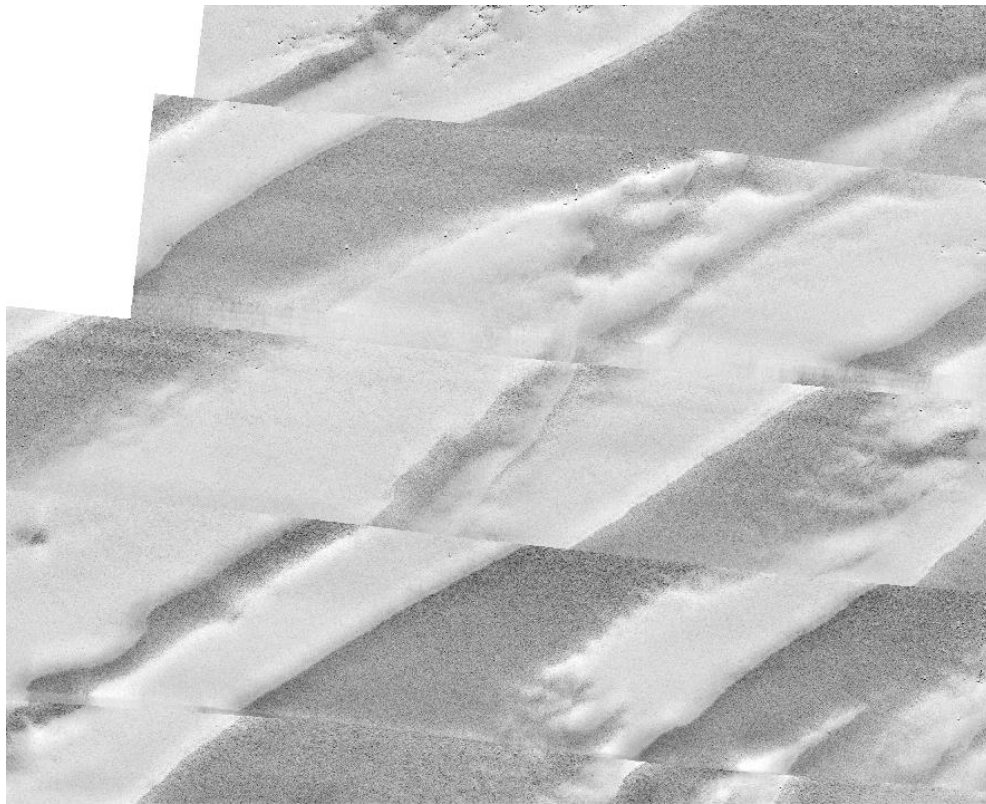

Figure 1. SSS survey OWF_SSS_20cm_1A.

281-282. I'm not sure I fully agree with this statement. The MBES backscatter were not subjected to full angular correction, and probably are not suitable for quantitative geomorphological/geological/habitat mapping analyses. The processing of these data is essentially incomplete.