

Dear editor in Chief Dr. David Carlson,

thank you for the opportunity of making minor corrections to finalize the submitted manuscript. We are very thankful for the time and effort spent by you and the two anonymous reviewers in revising our manuscript. Please find our point by point answers (black) to the latest remarks (blue):

1. Line 23 and Line 32> “offshore wind turbine (OWT)” can be “Offshore Wind Turbine (OWT)”.

We rewrote offshore wind farms / Offshore Wind Farms and offshore wind turbines / Offshore Wind Turbines with uppercase letters as requested in lines 23 and 32.

2. Avoid having headlines follow directly - e.g. section “2 Related research” and “2.1 Deep learning based image analysis in Earth observation”. Use the space in between to introduce what comes, why, and how it is structured (add a paragraph).

We added a paragraph to section 2 which explains the content and structure of the upcoming subsections.

3. Avoid having headlines follow directly - e.g. section “3 Materials and methods” and “3.1 Materials”. Use the space in between to introduce what comes, why, and how it is structured (add a paragraph).

We added a paragraph to section 3 which explains the content and structure of the upcoming subsections.

4. The literature review of the introduction can be improved by a brief analysis of > “Wind energy potential analysis using Sentinel-1 satellite: A review and a case study on Mediterranean islands”

Thank you for providing this insightful content. We read the suggested paper closely. It describes the estimation of wind energy potentials based on Sentinel-1 data. It is a very good example of how versatile the Sentinel-1 data can be used to gain knowledge in the offshore wind energy sector. We added a paragraph to subsection 2.2 “Offshore wind turbine detection in Earth observation imagery” line 82 in the related research section, which mentions the suggested study in the context of potential applications of Sentinel-1 data in the offshore wind energy sector. In order not to soften the focus of our manuscript too much, we have decided to put more emphasis on the extraction of persistent marine infrastructure and especially offshore wind turbines, as we have done so far. For this reason, there will be no detailed presentation of the wide field of wind energy estimation from radar data, as it is outside the topical scope of our manuscript which focuses on offshore wind energy infrastructure detection.

We are very grateful for the highly constructive revisions, the well organized submission process and support whenever we had questions.

Sincerely
Thorsten Hoeser