

Dear Editor,
here below are reported responses to reviewer
. All answer and changes are highlighted in red and will report in the doc (tracked changes). Please note that all line numbers mentioned in the responses refer to the version of the manuscript with tracked changes.

Editor Damian L. Arévalo-Martínez

Dear Authors,
many thanks for your thorough responses to the referee's comments and the revised version of your manuscript. One of the reviewers evaluated your latest version of the manuscript and indicated significant improvements, to which I agree. Nonetheless, there are issues which were raised during the second round of review (see comments below). I kindly invite you to address those and submit a revised version.

Reviewer comments

The article is much improved after the revision in my point of view.

We sincerely thank the Editor and the Reviewer for their constructive feedback and for acknowledging the significant improvements made to the manuscript. We greatly appreciate the time and effort dedicated to the evaluation of our revised version.

We carefully addressed the remaining issues raised during this second round of review, which helped us to further clarify methodological aspects and improve the transparency of our approach. Below, we provide a point-by-point response detailing the revisions made in the manuscript.

Two additional minor comments that would need to be addressed. This will be done very quickly probably, but I think it would be important:

Thank you for adding the tracklines, that makes more sense now. But even with the corrected tracklines of the MBES, I still doubt the 0.05 m resolution for bathymetry. The footprint size is almost certainly much larger than that, although I am not familiar with the characteristics of the long-range system of Norbit. An easy correction would be to mention that you upscaled the grid to 0.05 m resolution or exported an interpolated grid at that resolution (across-track, the resolution may be possible for snippet backscatter in FMGT). I think it is inconsequential to your results, since you do not depend on such fine spatial scales (? - see my other point), but there should not be a misconception that you could actually resolve this resolution from a ship-based MBES survey. If you disagree and 5 cm is actually measured, please demonstrate it in the article.

We thank the reviewer for this observation. As correctly pointed out, the 0.05m resolution grid was obtained by exporting an interpolated CUBE surface from QPS Qimera at this cell size. We have clarified this aspect in the manuscript (lines 149-150), specifying that the final bathymetric grid resolution reflects post-processing resampling and interpolation.

Line 173 and throughout the manuscript: What is a map unit? Please translate that to meters, so that the reader has an impression what settings you used for the TRI/TPI, in case somebody else wants to do that for corals. The map unit is also somewhat confusing, since half a map unit would be 0.025 m for the TRI if one assumed the grid resolution that was mentioned just before.

We thank the reviewer for highlighting this potential ambiguity. We have clarified that “map unit (m.u.)” corresponds to the spatial unit of DTM, expressed in meters. We therefore replaced m.u. with meter throughout the text to improve clarity.

I am still not convinced of the title." Mapping benthic marine habitats featuring coralligenous bioconstructions: a new approach to support geobiological research" I could imagine dropping the "benthic marine habitats featuring" and maybe add the location instead (Mapping coralligenous bioconstruction offshore Calabria, Italy: a new approach....". Clearly a subjective matter of taste though.

We thank the reviewer for the suggestion regarding the manuscript title. We understand the preference for a more concise formulation, and we agree that such a version would be equally valid. However, we prefer to retain the current title as it emphasizes both methodological innovation and its broader applicability to benthic habitat mapping beyond the specific study area. In particular, the expression “mapping benthic marine habitat featuring coralligenous bioconstructions” was intentionally chosen to underscore the role of geomorphometric analysis in the frame of habitat mapping, highlighting a methodological approach potentially applicable to other types of biogenic structures. For these reasons, and considering the reproducibility and transferability of the proposed approach, we believe the current title better reflects the scope and objectives of the manuscript.