

## ***Interactive comment on “A new method for calibrating marine biota living-depth using the 2016 Kaikōura Earthquake uplift” by Catherine Reid et al.***

**Catherine Reid et al.**

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Response to the Anonymous Reviewer-2

Important note: our responses to the Anonymous Reviewer's comments are in red italics and the line numbers in our responses refer to the revised version of the manuscript.

Dear editor,

Thank you for giving the opportunity to review the paper by Reid et al.

I read with interest the submitted manuscript and overall I believe it is an interesting contribution fitting the scope of the journal. The authors use tidal data and the eco-

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logical preference of intertidal algae to determine coastal uplift. They calibrate their biological data with both real-time and predictive tidal charts and compare their results with lidar and strong motion data. Overall, I think their proposed methodology will be of interest to many coastal geomorphologists and geologists working with coastal deformation and their paper deserves publication.

We thank the reviewer for the positive comments.

However, in order for their methodology to be replicated some revisions are necessary, primarily in the methods section. In particular, paragraphs 3.2.1 – 3.2.3 are quite hard for a reader to follow and more complicated than necessary. I suggest the authors to improve this part by explaining in a better way their methodological approach.

The manuscript has been clarified accordingly as a response to both reviewers' comments.

Some technical corrections: line 376: include the error bar → error is provided at line 559 line 389-390: error bar for NIWA and LINZ? → error is provided at lines 574 and 575 line 418: middle on line, “they” is not needed → Done. Caption of figure 1: line 570, note that the position of State Highway One is the yellow line → Corrected. Figure 6: I would suggest to include error bars → Errors are presented in Table 5 as they are too small to be represented graphically.

Please also note the supplement to this comment:

<https://www.earth-surf-dynam-discuss.net/esurf-2019-46/esurf-2019-46-AC2-supplement.pdf>

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Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2019-46>, 2019.

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