

## ***Interactive comment on “Alpha and beta diversity patterns of polychaete assemblages across the nodule province of the Clarion-Clipperton Fracture Zone (Equatorial Pacific)” by Paulo Bonifácio et al.***

**Anonymous Referee #3**

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A well written manuscript and a huge contribution of data for an area with limited but increasing data. This will be a useful resource for other researchers and deep-sea management in the region.

A few minor comments to accompany the comments on the attached manuscript. To me the hypotheses were not clear, I think the manuscript would really benefit if they were clearly defined in the introduction and revisited in the conclusions. An overview of why benthic diversity is important to a broader audience would be useful for the bigger picture as well as the ecological role of polychaetes within benthic communities. Why people should care about them? I love polychaetes but a lot of people don't. A

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brief description of the mining process, not all readers will be aware of this may be with a comment on the current likelihood of these operations happening and if so when. As stated the diversity estimates are very different, is there an additional method that can be used? With two measures that are both biased towards "singletons" is there a method that is not? Some images of the polychaetes would be nice, especially as photography was an important part of the method. These can be really useful for other research groups, will these be made publicly available? Maybe include a plate in the methods or results. I am not 100% familiar with the diversity analysis so can not critically comment on the methods/results for those sections. I leave this to the other reviewer and the editor. Many terms are not clearly defined but really important as often misinterpreted between papers. Table 1 could be supplementary.

Please also note the supplement to this comment:  
<https://www.biogeosciences-discuss.net/bg-2019-255/bg-2019-255-RC3-supplement.pdf>

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Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-255>, 2019.

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