

## ***Interactive comment on “Geographic distribution of free-living marine nematodes in the Clarion–Clipperton Zone: implications for future deep-sea mining scenarios” by Freija Hauquier et al.***

**Freija Hauquier et al.**

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Author's response to Referee's comments (RC1)

RC1: This manuscript presented the diversity of nematodes in surface 5 cm of sediments in the license areas (of Germany, IOM, Belgium and France) and reference area of the CCZ. The data are important to help make a decision on the mining method and designation of source areas to protect the seabed ecosystem when large scale mining of the nodules is carried out.

C1

Referee comment: In the part of Materials and Methods, the authors stated that the IOM samples were sliced per cm down to 5 cm sediment depth. However, there is no mention of this result. Please clarify that authors only used the total amount instead of different depth.

Author's response: This is indeed a valuable comment by the reviewer, and we failed to mention this properly in the first version of the manuscript. Therefore, we have added a sentence to the respective paragraph in the Material and Methods section. It now reads (Material and Methods, lines 30-32): “From each cm-slice (IOM) or bulk sample (all other areas), between 120 and 320 nematodes were randomly picked, transferred to anhydrous glycerol (Seinhorst, 1959; De Grisse, 1969) and mounted on slides. Later on, genus counts for the different sediment layers of the IOM samples were summed prior to statistical analysis.”

Referee comment: BGR was further divided into BGR\_RA and BGR\_PA, but these subareas were not labelled in Fig. 1. Please try to label them so that readers could know the sampling sites.

Author's response: The Figure 1 has been adapted and now includes labels for BGR\_RA and BGR\_PA. Also the Figure caption has been updated so that it is clear which sampling locations were investigated.

Referee comment: IOM should be the Interoceanmetal Joint Organization <https://iom.gov.pl/>. In the case of this manuscript with the same background of seabed mining, this abbreviation should be occupied by this organization. Therefore, I recommend the authors to have another abbreviation for Inter-Ocean Metal consortium (or maybe they are the same one in different forms).

Author's response: The reviewer is correct to assume that we mean the same organization and that the abbreviation should be Interoceanmetal Joint Organization. This has been adapted in the respective paragraph in the Material and Methods section.

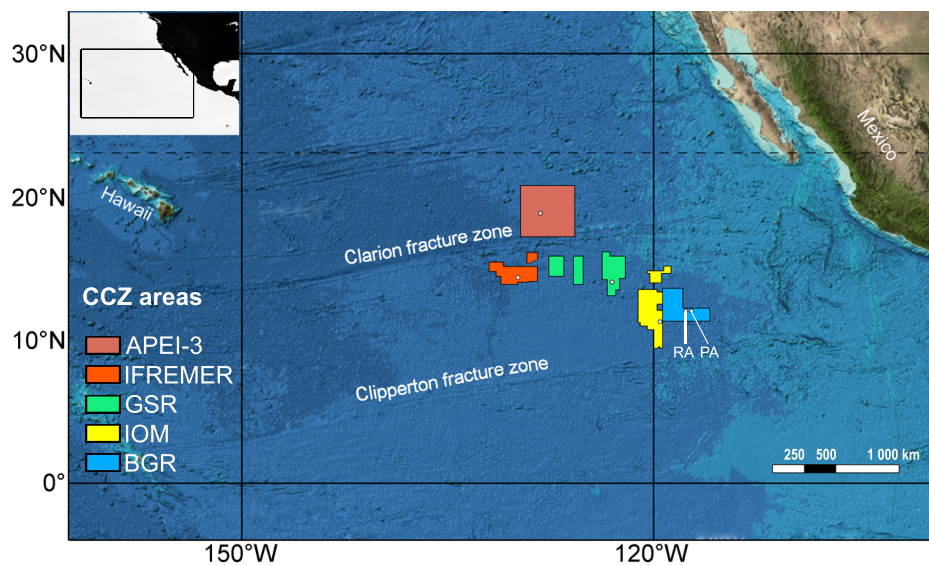
C2

Referee comment: The title is “geographic distribution: ”. Since all the sites are in the CCZ with similar geographical characteristics, I recommend the title to be “distribution: ”.

Author's response: Although we do believe that samples for this study were collected over a rather large geographic range, we do see the point that the reviewer is making here. So we are willing to remove the word 'Geographic' from the title of the manuscript since it would not change the focus of it.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-492>, 2018.

C3



**Fig. 1.** Figure 1: Overview map of geographical sampling region and different license areas studied.

C4