

Biogeosciences Discuss., referee comment RC1
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Comment on bg-2022-157

Anonymous Referee #1

Referee comment on "Zooplankton community succession and trophic links during a mesocosm experiment in the coastal upwelling off Callao Bay (Peru)" by Patricia Ayón Dejo et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2022-157-RC1>, 2022

The article entitled "Zooplankton community succession and trophic links during a mesocosm experiment in the coastal upwelling off Callao Bay (Peru)" presents a "Timing" of new or timely research results (of special scientific interest), which have not yet been communicated to the public.

The authors studied micro- and mesozooplankton in mesocosms simulating an upwelling under extreme and moderate conditions of the OMZ (N:P) signature for 50 days. To check for possible differences, they also collected samples at a point in the Pacific Ocean close to the mesocosms (control sampling). They obtained values for the abundances of the main species observed, as well as values for stomach content (gut fluorescence), fatty acids, elemental composition (C, N, O, P) and stable isotopes ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$).

The results obtained may contribute to the knowledge of these first links of the marine food web of one of the largest eastern boundary upwelling systems (EBUSs) the Humboldt Current System, where small and medium pelagic fishes, main predators of the study organisms, are abundant.

The potential and strength of this work are undoubtedly, however, one of the great weaknesses found in this work has been the lack of a study scheme carried out with the mesocosms that include the study area (location). Not including this information in the work itself has made it very difficult to understand the procedure carried out.

Likewise, there is a lack of coherence between the hypotheses, the objectives (practically non-existent), the results and the conclusions that are vague or do not fit the results obtained. Therefore, I suggest this work for "Major Revision".

In the attached PDF you will see my suggestions for improvement, both in the main text and in the figures and tables. You will also see specific comments and technical corrections, in order to encourage the robustness and strength of this work.

Please also note the supplement to this comment:

<https://bg.copernicus.org/preprints/bg-2022-157/bg-2022-157-RC1-supplement.pdf>