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**Our revised manuscript has slightly reduced Results and Discussion, and now is within the 4000 word limit.**  
  
Referee: 1  
  
• Highly relevant case study assessing whether the UK’s seafood system is fit for multiple bottom-line objectives. The novelty of this work lies in integrating the multiple dimensions (Fig. 3). The dimensions answer questions (i.e., are the product volumes available and are they affordable?) which makes demands for more sustainable and healthy blue food diets concrete for policymakers. The study will also serve as a starting point to examine sustainable and nutritious seafood systems in other countries.

**Thank you for your positive review of our manuscript, and recognition of its policy relevance.**

• I suggest reorganising the paper to focus on this novel aspect with an in-depth analysis of the UK data compiled (e.g., time series and statistical analysis), expanding the section ‘Sustainability and affordability of low-emissions nutritious seafood’. The marginal analysis (comparing to non-seafood products and global assessment) is, in great parts, not novel and distracts from the main message of the paper. I suggest either removing these parts or, at least, streamlining them (i.e. using the same indicators).

**Thank you for this suggestion. We agree much of the global comparison of high/low emissions and nutrients have been covered in detail by several key papers (cited in our manuscript). We have now streamlined our focus on global seafood and context of other animal-source foods by:**

* **reducing abstract to a one-sentence result on the global analysis**
* **removing the second paragraph from Results & Discussion that described variation in emissions/nutrients and examples of global seafood products**

**However, as the global nutrient and CO2 databases are the foundation of our UK analysis, we feel it is necessary to present these results in full before focusing in-depth on UK seafood production. For example, we estimate the kg CO2 per nutrient target, a new metric that we developed to link greenhouse gas emissions to seafood nutrient content (Fig. 1C). We also use our global analysis to introduce key concepts that relate to seafood production, such as using variability to identify groups where production shifts could reduce emissions and increase nutrients (Fig. 1B). Throughout the manuscript, we have also ensured that our global results are placed in context of recent global seafood analyses (Bianchi et al 2022, Gephart et al. 2021, Hallström et al 2019, Koehn et al 2022, Kovacs et al. 2021) (*first results paragraph*).**

**We do not have time-series data for all UK production sectors, but we have added a concluding sentence to note: “*Information on long-term patterns in seafood supply, affordability, sustainability and consumption will develop deeper understanding of the drivers of seafood systems, and thus inform efforts to promote low-emissions seafood production*” (*last main text paragraph*)**

Referee: 2  
  
This is a very valuable contribution to the field. Sustainable seafood is often viewed primarily through the lens of ecological ocean health. Adding the lens, as this manuscript does, of nutrition benefits to human health of different types of seafoods, actually enriches the discourse on how to meet global food needs in the future without destroying nature (and especially the oceans). The market has a tremendous role in driving both human food security and nutrition as well as ecological health. In this context, this is an important paper. The only criticism I have is that the figures are a bit blurry. I'm not sure if that is due to rendering when the submission was turned into a PDF for review or if it is because of the resolution of the figures originally. Authors, please check the resolution of the figures. Otherwise, great paper!

**Thank you for your positive and supportive review. We confirm the original figures are PDFs, but rendered at a lower resolution in the manuscript. These have been uploaded as separate PDF files in the revised submission.**