

Referee #3

The revised version of the manuscript is much clearer and easier to follow. Only minor concerns remain:

**Thank you, we are glad the revisions have improved the clarity and presentation of our study.**

-Replace bovine albumin with bovine serum albumin and the abbreviation BA with BSA.

**This change has been completed on lines 163, 221, and the Figure 2c title.**

-Figure 3: Provide a link or reference for the Hawaiian Ocean Time Series dataset.

**The link to the HOT dataset has been added on line 125.**

-In Figure 5, primary productivity and chlorophyll-specific primary production data are shown, but how primary productivity and chlorophyll a were measured is not provided in the method section.

**The PP and chl a data were measured as part of the HOT time-series and have the same source as the data from Figure 3 on particulate carbon and nitrogen. A statement has been added to the Methods section at lines 123-125 introducing where these data can be obtained including the link.**

**“Primary productivity, chlorophyll a, particulate carbon, and particulate nitrogen data measured as part of the HOT program for the period 1988-2022 were obtained from <https://hahana.soest.hawaii.edu/hot/hot-dogs/>.”**

-In the Conclusions and Future Directions section, the paragraph “Following the conversion of semi-quantitative [...] (or missing N supply) to ~9%.” Is redundant from the discussion.

**This paragraph at lines 638 to 646 has been deleted. A clause has been newly added at line 646-647 that summarizes the main point from the deleted paragraph which we seek to reiterate here in the Conclusion section as it is one of the main conclusions of the study.**

“... at station ALOHA by contributing 8.5-20% of net community production and reducing the ‘missing’ mixed layer DIC drawdown and N supply by ~57% and ~12%, respectively.”