

## Response to revised “Net primary production annual maxima in the North Atlantic projected to shift in the 21st century.”

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Review by Dr. Lee de Mora, Plymouth Marine Laboratory, Plymouth, UK

Thanks for your hard work. The abstract, introduction are all significantly improved, with a much clearer flow and logic. The methods and results sections have been streamlined and the overall tone of the text makes it easier to follow. The revised figures look great and support your conclusions. I'm also glad that you are now using consistent colouring for the regions in your figures. It does really help! As does adding regular reminders of the region names in the text.

Also, in addition to the changes to the manuscript, thanks for your patience in answering my questions in the Author's response. This has helped me understand the work and clarified the overall paper.

I'm happy for this paper to be accepted subject to a small number of very minor changes described below.

This is a great work and congratulations.

Lee de Mora

**Authors: Thank you again for the ambitious and thorough review that has greatly improved our work.**

### **Minor comments:**

Please note that the line numbers here refer to the tracked changes document:

[https://editor.copernicus.org/index.php?\\_mdl=msover\\_md&\\_jrl=11&\\_lcm=oc104lcm105m&\\_acm=get\\_authors\\_tracked\\_changes\\_file&\\_ms=110119&id=2268736&salt=1650201345432405649](https://editor.copernicus.org/index.php?_mdl=msover_md&_jrl=11&_lcm=oc104lcm105m&_acm=get_authors_tracked_changes_file&_ms=110119&id=2268736&salt=1650201345432405649)

L163 – Please add a sentence justifying the use of SSP5-8.5 (as you have in your response to the previous review.)

**Authors: This has been done on lines 101-102.**

L243: Move the link to a reference.

**Authors: The link has been moved to Data Availability.**

Results section: It looks strange to me to refer to a decade as 2085s? Typically, the decade 2080-2089 would be the “2080s”, not 2085s.

**Authors: This was done to simplify the notation of the 30yr periods: 1850-1879 (1865s), 1985-2014 (2000s) and 2070-2099 (2085s) as was suggested by reviewer 1. The definition to 2085s is stated on line 274.**

L412, L415: When you link to a software routine, it's best to use a monospace font like `Courier New` or something, or the command: `\texttt{ks_2samp}` in latex. ie `ks_2samp`, `crosscorr`

**Authors: This has been changed.**

L637: “That is, the large range of correlated lags indicate that the whole story is not simply that MLD acts as a control on NPP.” – this is a bit strangely worded, can you re-phrase it please? Maybe something like: “The large range of correlated lags indicate that that NPP is likely to be controlled by other factors, in addition to MLD.” Or something like that?

**Authors: We have rewritten.**

Finally, the conclusion sections needs a closing statement of some kind

**Authors: We have added a closing statement.**

Bibliography:

- DOI's sometimes have an http link and sometimes don't?
- L729: Extra spaces around “Sverdrup ' s”
- Sometimes author lists are separated by “and” sometimes by “&”
- Sometimes journals are abbreviated and sometimes they're fully named
  - ie: L 764: Geoscientific Model Development but L767: Geosci. Model Dev
- L898: Elsewhere Authors initials have periods: , ie: Smyth **T.J.**

**Authors: This has been corrected.**

As I said in my previous review, a citation manager should be able to automate this next time. It will save time in the long run. However, BG's typeset editor will likely notice (and hopefully correct) other issues here too.







