

In their manuscript, Boennec et al investigate the potential sources of variability in global biodiversity trend estimations. Since identifying these sources, or controlling them in future estimates, is key for understanding trends underpinning conservation actions and policy decisions, the importance of this work is undeniable. The manuscript is well-written and logically structured and it also scrutinises ample information to estimate factors potentially distorting biodiversity trend estimates.

I have three major issues with the manuscript though, both related to the methodology:

1. Only Web of Science was used to gather related literature. This not only raises the problem of an incomplete dataset, which the Authors discussed, but it also can lead to substantial biases and a non-replicable data collection. The Cochrane handbook for systematic reviews of interventions (Higgins and Cochrane Collaboration 2020) clearly advises for querying multiple databases to avoid biases and Pozsgai et al. (2021) reported that particularly Web of Science is unsuitable for reproducible searches because its result set (even if only Core Collection is used) depends on the subscription of the institution the search was initiated from. This, to a certain level, can be mitigated by reporting the exact date and institutional background of the search(es). However, other databases (such as Scopus), from this respect, may be more suitable for similar purposes.
2. Although the authors presented numerical summaries, a formal analysis is badly missing. Claims, such as “The time span did influence the conclusions” in line 290 are not statistically tested, we only see the differences between numbers – whether these differences are significant or not cannot be told. However, I believe, machine learning (e.g. GBM or random forest) and/or factor mining approaches would be fully suitable for this type of analysis.
3. When evaluating trends, splitting the trends into decreasing, increasing and stagnating, and mixed is too coarse – mixed can mean too many different trends. I suggest splitting the mixed to three further categories as “mostly decreasing”, “mostly declining”, and “equal”. Moreover, merging stable and increasing trends may also be confusing.

I also have a few minor comments, typos etc:

1. Figure 2C repeats info from the text
2. Alluvial plots look nice but, in my opinion, Figure 4 is too busy for this kind of visualisation. An online available interactive version of the same plot, or rethinking what and how is shown in the figure, might help though.
3. Numbers of used papers in some parts of the analysis do not add up for me: if 91 papers were scrutinised why the sum of papers is Table 1. is 54? Also, how the numbers (27 and 32) for Figure 4 and Figure 5 were calculated?
4. Typos and unclear wording:
 - a. line 10: comma after “remains”
 - b. line 11: not clear what is “being of social..”
 - c. line 73: should be clarified what pressures
 - d. line 76: climate change is also anthropogenic
 - e. line 146: summarises instead of “summaries”
 - f. line 208 “declined” the drivers?

- g. line 226: “effects” of what on biodiversity?
- h. Line 243: change to: Papers relying on empirical data in majority used

Higgins JPT, Cochrane Collaboration (2023) Cochrane handbook for systematic reviews of interventions. Version 6.4, <https://training.cochrane.org/handbook/current>

Pozsgai G, Lövei GL, Vasseur L, et al (2021) Irreproducibility in searches of scientific literature: A comparative analysis. *Ecology and Evolution* 11:14658–14668.
<https://doi.org/10.1002/ece3.8154>