

Review of " Decadal changes in phytoplankton functional composition in the Eastern English Channel: evidence of upcoming major effects of climate change?"

by

**Hubert Z., Louchart A., Robache K., Epinoux A., Gallot C., Cornille V., Crouvoisier M.,
Monchy S. and Artigas L. F.**

Thank you very much to the authors for those important modifications on the paper as well as for their answers. The article reads really better now and in my opinion is an excellent paper.

I would like however to address very minor comments that do not need any further revision.

1- Please try to be consistent all over the article on the terms used for silicic acid and other nutrients ; there are still some inconsistencies :

➔ L. 342 “dissolved nitrogen” vs. L. 344 “Dissolved inorganic nitrogen”

➔ Appendix A : “dissolved silicate” / “Si limitation” vs “phosphate and nitrogen limitation” / “Slightly limited by Si or nitrogen” / “Si-limiting”

If you decide to use Si, then use N and P (within the whole paper and not only the appendix). Otherwise use “silicon” (which is the element) as “nitrogen” or “phosphorus”

As a reminder, it would be more accurate to use “dissolved Si” (and dissolved N or P...) or “dissolved silicon” (and dissolved nitrogen or phosphorus) or “silicic acid” or just “Si” (and N or P) instead of “silicate”

2- I understand that no PAR no light data could be used for the study and this is not a problem. However, since light is an essential factor, I would recommend the authors to consider this important potential limiting factor by a short comment in the Results section (p. 10, paragraph 3.3.1) and/or in the discussion.

3- Some sentences remained truncated after the revision:

L. 340 “This decline confirmed substantiated by observations along Boulogne-sur-Mer (transect BL), where [NO₂ + NO₃] concentration exhibited a consistent decrease ranging from -0.63 to -1.72 µM over the two decade period (2000-2020 Lheureux et al., 2023).”

L 370 “Indeed, Lefebvre et al. (2011) described dissolved silicate and phosphate as the most are the main limiting nutrient in the EEC.”

L. 376 “Lheureux et al. (2023) documented an increase in Si:P and Si:N ratios at the SRN station in Boulogne-sur-Mer, while the SOMLIT (National Observation Service of the Research Infrastructure ILICO) coastal station (South of Boulogne-sur-Mer and further offshore) showed a decrease...”

4- A minor typo L. 443 “surveyx” to be corrected.