

Interactive comment on “Technical note: Interpreting pH changes” by Andrea J. Fassbender et al.

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Received and published: 15 December 2020

Thank you for supporting publication of the manuscript and for providing constructive feedback.

Below we address each comment from your review in order of appearance.

The manuscript was submitted as a Technical Note rather than a Research Article because the concepts and content are not original. Instead, the manuscript explains an important aspect of pH change analysis and interpretation that is relevant to how the oceanographic community conceptualized ocean acidification. By providing concise explanations and clear illustrations of the key concept, the message can be delivered in a short, accessible format that is more likely to be read, leading to broader imple-

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mentation of the recommendations.

We deleted the sentence on line 477 as it was unnecessary and potentially confusing.

The Figure 3 caption has been updated as follows: Shown are the decadal changes in (b) A-pH and (e) A-[H⁺] (nmol kg⁻¹) relative to the 1950s as well as the surface ocean (c) pH and (f) [H⁺] (nmol kg⁻¹) monthly anomalies relative to the annual mean at KEO and DPN during the 1950s (thin lines) and 2090s (thick lines). Global maps show the total change in (g) A-pH and (h) A-[H⁺] (nmol kg⁻¹) between the 1950s and 2090s.

Referee #1 found the extensive referencing useful in guiding the reader to additional resources on related topics. Ocean pH changes are studied across a broad range of space and time scales and within numerous oceanographic subdisciplines. Each discipline contributes a unique perspective and applies different research tools. In effort to make the article relevant to a range of oceanographers considering pH changes, examples from different subdisciplines were used (i.e., work involving time-series, autonomous sensors, numerical modeling, and hydrography), requiring extensive citation of prior literature. Still, we have made an effort to reduce the total number of citations as well as redundant citation appearances throughout the text – shortening the reference list by 1.5 pages.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-348, 2020>.

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