

***Interactive comment on “Ideas and perspectives:
A strategic assessment of methane and nitrous
oxide measurements in the marine environment”
by Samuel T. Wilson et al.***

Anonymous Referee #3

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In this paper, Wilson and colleagues provide a blueprint for future research effort into constraining N₂O and CH₄ emissions from the marine environment. Overall the paper is well written, clear and covers the main points of interest in this research area. One comment that I would make, is that for a perspectives paper on a global issue, the authorship is very USA/Europe heavy. I understand this is a reflection of the OCB workshop attendees, but to ensure global collaboration on this very important issue, engagement with researchers from across the world is needed. While the processes and mechanisms controlling CH₄ and N₂O production and emission are reasonably well understood, the main issue is a set of SOP and certified reference material to guide the research and provide robust and inter-comparable results.. Engagement

C1

with the broader research community is needed to ensure these best practice protocols are taken up. It is encouraging to read these are currently being developed, but I do wonder how reference material of significant quantities can be produced and delivered to the various labs, particularly those using equilibrator-gas analyzer set ups which are becoming the standard (as opposed to discrete samplers with GC analysis). Some details on how this issue may be overcome would be welcomed.

These are the only minor comments I have on this paper, and I look forward to seeing it in print.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-270>, 2020.

C2