Biogeosciences Discussions

Biogeosciences Discuss., referee comment RC2
https://doi.org/10.5194/bg-2020-492-RC2, 2021

Comment on bg-2020-492

Gad Levy (Referee)

Referee comment on "Ideas and perspectives: Ushering the Indian Ocean into the UN Decade of Ocean Science for Sustainable Development (UNDOSSD) through marine ecosystem research and operational services – an early career's take" by Kumar Nimit, Biogeosciences Discuss., https://doi.org/10.5194/bg-2020-492-RC2, 2021

This is a timely early career perspective that correctly notes both the importance of Marine Ecosystem Research and Operational Services in the Indian Ocean (IO) going forward, and the fact that such research and services took somewhat a back-seat compared to other basins in previous decades. Overall, it is well written. I would recommend that some discussion could be expended, either directly, or through additional references, and that some language improvements could be made:

(1) In the introduction, the author correctly mention the recent shift to operational oceanography. This shift is international and it is worth mentioning or citing initiation of the first international operational satellite oceanography symposium in 2019 (with a second one planned for 2021), as an international global effort.

(2) The author correctly notes the great opportunities opened by the proliferation of satellite missions and the "swarm" of nano-satellites. This is correct, however, it comes with several challenges that should be equally discussed here, or at least mentioned by reference. These include problems in representation due to satellite orbit requirements (geostationary, polar orbiting) that include over and under spatial sampling, aliasing, unresolved/upsampled variability, as well as issues that arise from the deluge of satellites, to name a few. A recent short EOS news article highlighting the satellite overcrowding challenge is: Bruinsma, S., M. Fedrizzi, J. Yue, C. Siemes, and S. Lemmens (2021), Charting satellite courses in a crowded thermosphere, Eos, 102, https://doi.org/10.1029/2021EO153475. Published on 19 January 2021.

(3) The author correctly highlights the importance of satellite communication based alerts during fair weather. The same is true and perhaps even more crucial during storms, and should be discussed.

(4) There are numerous typos/ language/grammatical/auto-speller mistakes, that should be corrected. A list was provided directly to the author as it is not relevant for the discussion.