

Earth Syst. Sci. Data Discuss., referee comment RC2  
<https://doi.org/10.5194/essd-2022-160-RC2>, 2022  
© Author(s) 2022. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## Comment on **essd-2022-160**

Anonymous Referee #2

---

Referee comment on "Global dataset on seagrass meadow structure, biomass and production" by Simone Strydom et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-160-RC2>, 2022

---

This data set and its description is useful, and I can foresee its use in many different ways. My specific comments are as follows:

1. In the introductory paragraph about seagrass ecosystem functions and services, consider adding water purification/filtration to the list. Suggested references: Lamb et al 2017 (Science), Ascioti et al 2022 (Ecosystem Services).
2. In section 2.1 (literature search), the stated search terms did not include *Syringodium*, but this species was in the results. The term 'exten' in the search - should it be 'exten' or 'extent'?
3. In section 2.2, the last paragraph (line 120) seemed out of place because it described the way natural history reporting has evolved, not a method. You may want to consider moving this to the Results and Discussion section.
4. I found it difficult to differentiate between species because of the colour gradient in Figure 3 - the yellows/oranges in particular (*Amphibolis*, *Cymodocea*, *Enhalus*), were harder to make out than the rest. On this note, I'd suggest checking for the use of colorblind safe gradients in ColorBrewer (<https://colorbrewer2.org/#type=sequential&scheme=BuGn&n=3>). I think this map is useful for summarizing research hotspots and gaps at a glance, and it would be a shame if the reader did not get the full experience of it.
5. Section 4 (Line 196): there is a mismatch between the text and abstract. The text says, "...the least number of data was related to seagrass reproduction (9% of data)" but the abstract says it's production that has the least data points, at 10%.

6. Nice work in building this data set - this was a tremendous effort. I did notice some missing papers. In many of the papers with such seagrass data, the titles and keywords often don't use the search terms you've selected. We often use terms such as 'condition' or 'status', so this is possibly why some papers were not picked up in your search. Here are some additional papers that have the data you're after but are not in your list:

- Marba, N., Duarte, C. M., Terrados, J., Halun, Z., Gacia, E., & Fortes, M. D. (2010). Effects of seagrass rhizospheres on sediment redox conditions in SE Asian coastal ecosystems. *Estuaries and Coasts*, 33(1), 107-117. doi:10.1007/s12237-009-9250-0
- McKenzie, L. J., Yaakub, S. M., Tan, R., Seymour, J., & Yoshida, R. L. (2016). Seagrass habitats of Singapore: Environmental drivers and key processes. [ENV REQ]. *Raffles Bulletin of Zoology*(34), 60-77.
- Muta Harah, Z., Japar Sidik, B., & Hishamuddin, O. (1999). Flowering, fruiting and seedling of *Halophila beccarii* Aschers. (Hydrocharitaceae) from Malaysia. *Aquatic Botany*, 65(1-4), 199-207.
- Novak, A. B., Hines, E., Kwan, D., Parr, L., Tun, M. T., Win, H., & Short, F. T. (2009). Revised ranges of seagrass species in the Myeik Archipelago, Myanmar. *Aquatic Botany*, 91(3), 250-252. doi:10.1016/j.aquabot.2009.07.002
- Ooi, J. L. S., Kendrick, G. A., Van Niel, K. P., & Affendi, Y. A. (2011). Knowledge gaps in tropical Southeast Asian seagrass systems. *Estuarine, Coastal and Shelf Science* 92(1), 118-131. doi:doi:10.1016/j.ecss.2010.12.021
- Terrados, J., Duarte, C. M., Fortes, M. D., Borum, J., Agawin, N. S. R., Bach, S., . . . Vermaat, J. (1998). Changes in community structure and biomass of seagrass communities along gradients of siltation in SE Asia. *Estuarine Coastal and Shelf Science*, 46(5), 757-768.