

Interactive comment on “The Civitavecchia Coastal Environment Monitoring System (C-CEMS): a new tool to analyse the conflicts between coastal pressures and sensitivity areas” by S. Bonamano et al.

Anonymous Referee #1

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General comment: This manuscript presents and describes the Civitavecchia Coastal Environment Monitoring System (C-CMES). The system integrates several components such as fixed stations, in-situ surveys, satellite observations and numerical models to forecast, evaluate and face pollutants dispersion. Two applications of C-CEMS are presented here: 1) Bacterial dispersion in bathing areas and 2) evaluation of dredged sediments dispersion on Sites of Community Importance (SCI) where *Posidonia oceanica* exist. In my opinion, the topic and the results obtained in this manuscript are relevant for its contribution to achieve a Good Environmental Status (GES) within

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the MSFD and for its implications for coastal environments and society. In my opinion, the manuscript is well written, well documented and its methodology and results are supported by previous work of the authors. For these reasons, I believe that this is a study of good quality that I can recommend for its publication.

Specific comments: Page 1601 lines 7-24. For me is not clear from the text if the “Data processing and standardization” was applied only to the data from fixed stations or to all data produced. If it is only applied to the data from fixed stations I think this should be included in the corresponding subtitled “Fixed stations”. If it is not please clarify better here. Page 1602 lines 3-19: Please add the temporal resolution of your satellite observations. Daily? For me it is not clear from the text if the authors have used algorithms previously developed for the extraction of Chla and TSM using SEADAS or local ones for CASE II waters. Please clarify and add a little more of information about the algorithms used. I suggest the authors to rewrite the paragraph and try to not mix sensors, products and methodologies. Page 10607 lines: 3-7: I would appreciate here a little bit more of information about that consist the in situ samplings, what type of information was registered and how the thematic maps were created. Or in other case, please give a reference where the reader can find this information. How this in situ information was used or is going to be used? Authors show that the suspended sediments can reach zones of *Posidonia oceanica*, have they studied some change in these meadows? Figures. I would suggest the authors add at least one scale and North arrow to have a reference. Fig. 1. I would recommend the authors to add a map of Italy here. Thus the reader could locate the study area within the Italian region at a first glance. Fig. 7. It is difficult to read the legends of these figures, especially B. I suggest making these figures and legends larger. Technical corrections: Page 1603 line 8-9: Eliminate “we solved the”

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