

Interactive comment on “Ecosystem metabolism in a temporary Mediterranean marsh (Doñana National Park, SW Spain)” by O. Geertz-Hansen et al.

Anonymous Referee #3

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The manuscript studies ecosystem metabolism (GPP, NCP, R) in a Mediterranean marsh. The authors show that the ecosystem is autotrophic due to the excess carbon produced by the benthic compartment that counterbalances the deficit in carbon production by the pelagic compartment. The authors also give a threshold value for irradiance, below which the marsh becomes heterotrophic. The manuscript represents an interesting contribution regarding the role of marshes, and especially that of benthic macrophytes, in carbon cycling. Overall, the manuscript is well written. The data are analyzed and discussed properly, although the dataset is rather limited and old (only 9 stations visited once in 1991). Anthropogenic pressure has increased the past 20 years, implying that the metabolic balance may have changed in the course of these

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years. It would be interesting to have recent data as well, and maybe a short comment on that would be worthwhile.

Please see below minor corrections:

Indicate correlation coefficients and p-values in Fig. 3, 4, 5 and 6. Specify which relationships were significant in the text (e.g. P6504 L24-25, P6506 L 1-2).

Fig. 3 The open... show the ...

Fig. 7 Use superscripts/ subscripts for O₂ and m₂ at the legend

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