

Interactive comment on “Benthic phosphorus and iron budgets for NW-African slope sediments; biogeochemical processes and the importance of bioturbation” by K. Küster-Heins et al.

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Dear Kathrin Küster-Heins and co-authors:

Thank you for submitting the above manuscript to our journal. It has been expertly refereed by Richard Jahnke and two anonymous referees. Their recommendations were published in the Interactive Discussion forum. You might have noticed that the reviewers, although they found merit in your study, have raised a number of concerns that preclude acceptance in its present form.

You have already commented on most of their concerns in the Interactive Discussion. Nonetheless, some of your comments are not sufficient, or you even skipped some

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important aspects of the referees. Especially in the ones which address the comments of referee 2, which can be due to some extent to a misunderstanding. Nonetheless, I would like to ask you if you feel able to address the comments in more detail, then I will be happy to consider a revised manuscript.

I will point out only some examples:

1) I strongly agree with referee 2 that the title is too promising, because you did not study bioturbation in detail. As you wrote in your conclusion section: the balance approach "indicates" the importance of particle mixing. You did not prove it. You also did not address other important aspects of benthic P fluxes.

2) The squeezing method led obviously to substantial changes of chemical composition of Fe and P data. Although it is a method often used in marine studies, your data clearly showed that an interpretation of squeezing Fe and P data of your cores is not adequate. What about Mn? Mn should be also affected. Please, provide one complete data set from one core of both methods and then use for further results and discussion only the rhizon data.

3) Please avoid too many speculations on the total release of P (P. 5382).

4) Referee 3 wanted to know the range of pore sizes of the rhizon sampler (P. 5377).

I am looking forward to receiving your revised version in due course together with a point-by-point response to all the reviewers' comments. Please indicate where the modifications have been made.

Best wishes

Prof. Kirsten Kuesel CO-Editor Biogeosciences

Interactive comment on Biogeosciences Discuss., 6, 5373, 2009.