

## Reply on RC2

Marco Yseki et al.

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Author comment on "Millennial variability of terrigenous transport to the central–southern Peruvian margin during the last deglaciation (18–13 kyr BP)" by Marco Yseki et al., Clim. Past Discuss., <https://doi.org/10.5194/cp-2021-183-AC2>, 2022

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"The manuscript presents new grain size and FRX analyses for two marine sediment cores of the Peru coast. Besides the marine sediment cores, the authors analyzed some modern samples collected close to the core sites. By comparing the Ti/Zr ratio and the end member analysis for the grain size distribution, they could depict the contribution of fluvial and aeolian sediments to the core-site. Thus, they relate the changes in sediment supply to changes in precipitation and surface windy intensity. The use of modern samples increases the reliability of the proxy interpretation. They present new paleoclimatic information for an important region of South America.

Overall, the manuscript is clear and well writing and the data support the discussion and the conclusion. The mechanisms presented are in accordance with the literature, and the manuscript fits the scope of CP.

Minor changes could improve the quality of the text, and besides the suggestions made by RC1, which I totally agree with, below there are some suggestions:"

***We thank the reviewer for the constructive comments.***

"Authors could present a distribution map for the surface samples stations."

***A map indicating the location of the surface samples was presented in supplementary information. However, new maps will be prepared in the new manuscript.***

"In methods, they mention the  $\delta^{14}\text{C}$  analyses were performed in bulk samples, but they did not mention if the organic matter or carbonate were dated, since they use the  $\delta R$  to calibrate, I assume that they have dated the carbonates of the sample. But it should be mentioned, and why they chose to date the bulk sample and not just specific forams e.g."

***In the new methodology section, we will indicate that the  $^{14}\text{C}$  analyses were performed on organic matter. As this OM is largely dominated by planktonic marine organic matter,  $\delta R$  is considered.***

"In topic 3.4, the authors could better explore the XRF result, which is very important to support the end members. Ideally, the results section should not present interpretation,

and as it stands, this topic only presents the interpretation of changes in fluvial discharge."

***You are right, we will better explain the XRF results and interpretation in a new paragraph of the discussion.***

Line 23: change the font after 77 to symbol, from "u" to "m".

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 41: Overturning is misspelled.

***Thank you we will correct it***

Line 85: "the" is missing before "other".

***Thank you we will correct it***

Line 96: I suggest using the past tense.

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 138: add "s" after "period" and remove "d" from calibrated.

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 185: review the use of the word "such"

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 193: offshore is misspelled

***Thank you we will correct it.***

Line 240: "the" is missing before "abundance"

***Thank you we will correct it***

Line 333-334: remove the sentence: "SST proxies indicate an indicate an increase of the zonal"

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 344: change "process" to "processes"

***The reviewer's recommendations will be taken into account in the new manuscript.***

Line 353: it is Pisco instead of Callao.

***You are right, we will change it.***

Line 371: "the" missing before "North"

**Thank you we will correct it**

***Thank you for this detailed revision.***