- Radiocarbon dating: The authors state that the organic matter they dated is "of mixed origin, composed of marine planktonic/algal material and continental woody material" (p.5, l.3-4). In this case, one may wonder if correction for marine reservoir effect is appropriate – it may lead to an overcorrection of the dates? It would have been better, of course, to be able to date terrestrial macrofossils instead of bulk organic matter – but these are notoriously missing in such environments. However, for further studies, the authors may consider the possibility of picking small particles of charcoal (200-500 μm), which may be present in the sediment and may provide more reliable ages. This, and the general aspect of the age-depth model (Fig. 2) indicate that indeed time constrain may not be that reliable below ca. 4000 BP, and this renders it difficult to compare short-term events with other records. Although the authors take great care to emphasis this in the discussion, it may be better to acknowledge this issue by introducing more caution (e.g., by the use of ca.) when summarising the results (e.g. in the abstract).

Thank you for this remark and the suggestion about dating charcoal particles for future research. The referee's advice has been taken on board by using "ca." for all dates within the abstract and the paper text.

As the referee rightly points out, terrestrial organic material suitable for dating is lacking in such sediments. The presence of benthic foraminifera, the mixed origin of the dated materiel, and the absence of data regarding the relative percentages of planktonic/algal material and continental woody material within each sample, obliged us to correct the dates for marine reservoir effect. In all, we think that we have an acceptable chronological framework as maximum age error ranges from 1 to 2 centuries considering the error bars with or without corrections for reservoir effect. Efforts have also been made to obtain a maximum age control within the sequence by cross-checking ^{14}C dates and tephrochronological data. Unfortunately, sieving and observation under binocular microscope do not allow tephra particles to be identified, even though such material has been reported from the nearby Sebkha Mhabeul (Marqueur et al.2008).

- Comparison to other records: Roman period: there are actually some indications that the climate may have been colder during the Roman period in the Middle East, so the term "Roman Warm Period" may not be appropriate for the whole region. . . (e.g. Issar 2003 - Climate Changes during the Holocene and their Impact on Hydrological Systems, INTERNATIONAL HYDROLOGY SERIES, Cambridge university press).

We thank the referee for this remark highlighting the problems arising from the use of northern European terminology when dealing with climate change in other regions, especially when this terminology includes climatic indications such as "warm". The "Roman Warm Period" does not have a global signal as an RCC with important regional differences and peculiarities (e.g. Martín-Puertas et al. 2008). Therefore, we use "Roman Warm Period" as a generic term for this climate event and refer to it within the text as a climate episode "commonly known as the Roman Warm Period (RWP)". Based on our data, we do not yet have information as to whether this period was warm or cold and the main element that we discuss is the relative wetness of this period based on our data compared to other records from the southern Mediterranean. Therefore, we have decided to use the term "Roman Humid Period-RHP", as done, for example, by Martín-Puertas et al. 2009 and Jiménez-Moreno et al. 2013 for southern Spain. "Roman Humid Period" seems more appropriate and consistent with our data and other southern Mediterranean records discussed in the text, such as the Middle East where a colder and more humid climate prevailed during the Roman period (Issar, 2003).

References:

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