



Comment on **essd-2021-49**

Helmut Brückner (Referee)

Referee comment on "Last Interglacial sea-level proxies in the western Mediterranean" by
Ciro Cerrone et al., Earth Syst. Sci. Data Discuss.,
<https://doi.org/10.5194/essd-2021-49-RC1>, 2021

General evaluation:

This is a very good, very systematic and much needed compilation of most of the data for the Last Interglacial marine deposits in the Mediterranean.

It is a rich and valuable source. Now the research can start on areas where sea level indicators are there but as yet not well or controversially dated. This compilation will definitely revitalize the discussion about the Last Interglacial in the Mediterranean - all the more since the MISS 5.5 deposits and terraces are very good indicators for neotectonics (see below).

Specific comments:

(1) You seem to have made use only of texts in English, French and Italian. Unfortunately, the important PhD theses of Brückner (1980)* and Radtke (1983)** - in German - are missing. Please see also more references I added to the bibliography.

*flight of 11 marine terraces bordering the Gulf of Taranto, southern Italy, including the MIS 5 terraces (this is well summarized in the "TARANTO - IGCP 639 Field Guide", STOP 3, which I attach.

**marine terraces of central Italy at the Tyrrhenian Sea, including the MIS 5 terraces

(2) You rightly replaced *Strombus bubonius* by *Persistrombus latus*. Why not also replace MIS 5e by MIS 5.5.? This makes more sense than the combination of numbers and letters (also: MIS 5c = MIS 5.3; MIS 5a = MIS 5.1). First time you mention MIS 5.5 is in line 777, next time in line 1039.

(3) You could mention in this text that the MIS 5.5 terrace or MIS 5.5 deposits are excellent indicators for neotectonic movements - even if this has already been mentioned elsewhere. This makes your research even more valuable. When the MIS 5.5 terrace is at an elevation higher than 10 meters, this definitely indicates a long-term uplift trend of the region (e.g., southern Calabria). When the MIS 5.5 terrace is missing it may have been

eroded or it is submerged (e.g., Dalmatian coast).

(4) The transgression peak is a sea level indicator, not a good one, but it shows the farthest inland expansion and the uppermost limit of the 5.5 terrace.

(5) You systematically combine maps with location of the sites with a lower panel in which the altitudes of the MIS 5 terraces are visualized (starting with figures 8, 9, 11 etc.). You should repeat the numbers of the sites in the map also in the lower panel, so that the link between map and panel is clear (in cases, where sites cluster, the assignment is unclear).

(6) Table 1: These descriptions/definitions should definitely (!) be supported by cartoons visualizing what you mean. A good cartoon/figure says more than many words!

(7) Since this is so fundamental for your article you should dedicate a paragraph to what is understood by MIS 5e = MIS 5.5 (definition; time span; a graph showing the MIS 5.5 peak and the subpeaks of MIS 5.3 and MIS 5.1), show a curve with the MIS 5 record and the MIS 5 sea-level fluctuations.

(8) See also some references added to the bibliography.

(9) See also my comments on the PDF of the text.

General remark concerning language and orthography

The text should be edited/polished by a native speaker. Just a few remarks from my side:

- In English there is no comma before "that".
- "et al.", dot after "al"; abbreviation from "alii"
- names of biological species in italic letter, but not "sp."
- there should be a spacing between the number and the dimension (e.g.: "28 m").

Please also note the supplement to this comment:

<https://essd.copernicus.org/preprints/essd-2021-49/essd-2021-49-RC1-supplement.pdf>