

Clim. Past Discuss., referee comment RC2
<https://doi.org/10.5194/cp-2022-17-RC2>, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on cp-2022-17

Anonymous Referee #2

Referee comment on "An Early-Mid Holocene process of regional desertification recorded in aeolian sediments from the northern slope of the middle Himalayan Mountains" by Yang Gao et al., Clim. Past Discuss., <https://doi.org/10.5194/cp-2022-17-RC2>, 2022

I read in-depth the Manuscript " An Early-Mid Holocene processes of regional desertification..."

I find the practice in this manuscript as problematic, although it appears in recent years again and again in the literature. In my opinion, the procedure presented is weak and has no real scientific value.

This paper takes a very small exposure (even if it comes from an interesting location, provides overlapping-in-range four OSL ages, and numerous grain size analyses to claim desertification and correlate it with detailed global high-resolution data. One small exposure of fine eolian sand cannot be the basis for claiming desertification and even not drying or a drought phase (which I find the authors mixing between them, something that seems taken too lightly). Furthermore, the assumption that it is the result of drying avoids other possibilities such as higher winds...).

The overlap of ages, which is common with OSL, cannot resolve the chronology in the way the authors wish. Therefore, the data they supply are insufficient to support their discussion. they apply the ages according to a central trend (inset in fig 2a). this is a weak practice. also, the overlap between the two lower ages precludes any chronological claim. and the thousands of years of overlap is again very problematic. And from this to go to global correlation makes it an arm-waving paper, rather than an in-depth paper.