

Interactive comment on “Low-resolution Australasian palaeoclimate records of the last 2000 years” by Bronwyn C. Dixon et al.

Anonymous Referee #2

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This is a very clearly written manuscript, making a convincing case for compiling multiple low-resolution archives of past environmental/climate change in the Australasian region. The paper could be useful for future palaeo-studies in the region and could inspire research teams to produce similar compilations for other regions.

Which calibration curve was used for the terrestrial sites, SHCal13? Make this clear within the methods. For the marine sites, how were marine δR values and their uncertainties estimated, e.g. using <http://calib.org/marine/> ? Which data-points were used to estimate δR values for each site? Please provide this information as supplementary information or at your NOAA archive, so that others can replicate your findings.

p1 line 16, what are progressive Bayesian techniques?

p2 line 4, but one could argue that during this recent time, human impact might have

C1

affected more of the proxy records. Could this potentially be a problem in some of your sites?

p6 line 12, don't forget to list the error associated with having non-dated levels, and thus requiring an age-model that provides realistic estimates of uncertainties (as you explain later, on p7 lines 16-24). Perhaps cite Bennett, K.D. 1994 (The Holocene 4, 337-348), Telford et al. 2004 (Quat. Sci. Rev. 23, 1-5), and Trachel & Telford 2016 (The Holocene doi:10.1177/0959683616675939).

Perhaps cite Flantua et al 2016 (Climate of the Past 12, 387-414) for another recent compilation of regional chronologies.

p8, line 18, Bacon does not exclude outliers but deals with them through using student-t distributions for all dates as default (not student-t tests) - these distributions look much like normal distributions but have wider tails. As a result even dates that seem outlying to our eyes (i.e. lying far away from the model and neighbouring dates) will often still fit the age-model (probability distribution >0 at the age-model at the depth of said date).

Language

p12 lines 22-24, check sentence

p13 line 12, associated & line 18, influenced

p17 line 29, Indonesian

p18 line 11, shown

p22 line 4, renewed efforts to renewed efforts to

p25 line 24, diversity

p26 line 25, Past Global Changes (not glocal)