



Supplement of

Signals of Holocene climate transition amplified by anthropogenic land-use changes in the westerly–Indian monsoon realm

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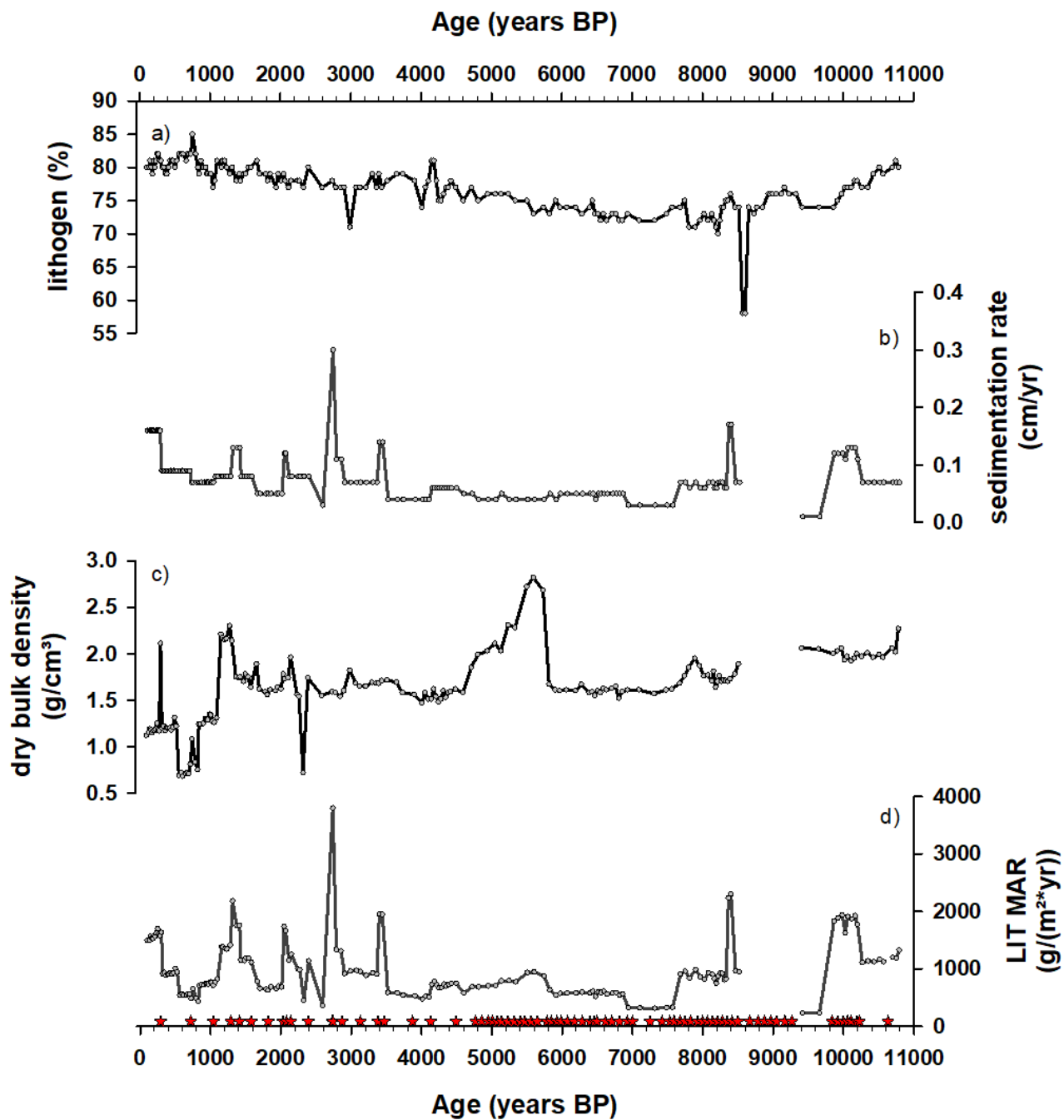


Figure S1: a) Content of lithogenic material, b) sedimentation rates, c) dry bulk density and lithogenic mass accumulation rates (LIT MAR) of SO90-63KA. Red stars indicate ¹⁴C dates of planktonic foraminifers (Staubwasser et al., 2002, 2003).

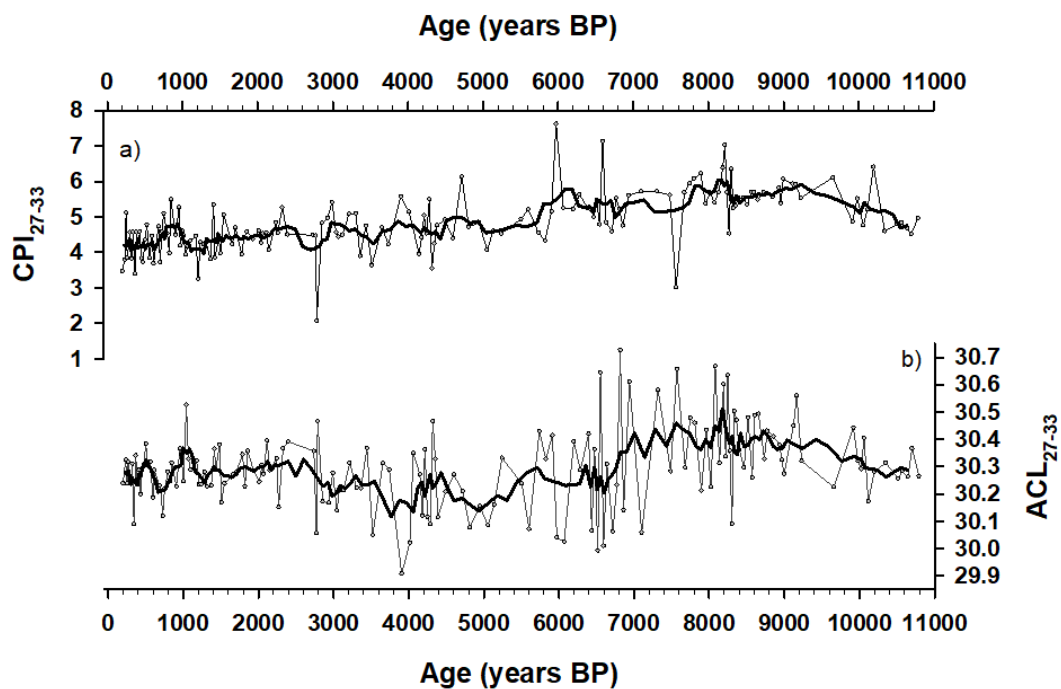
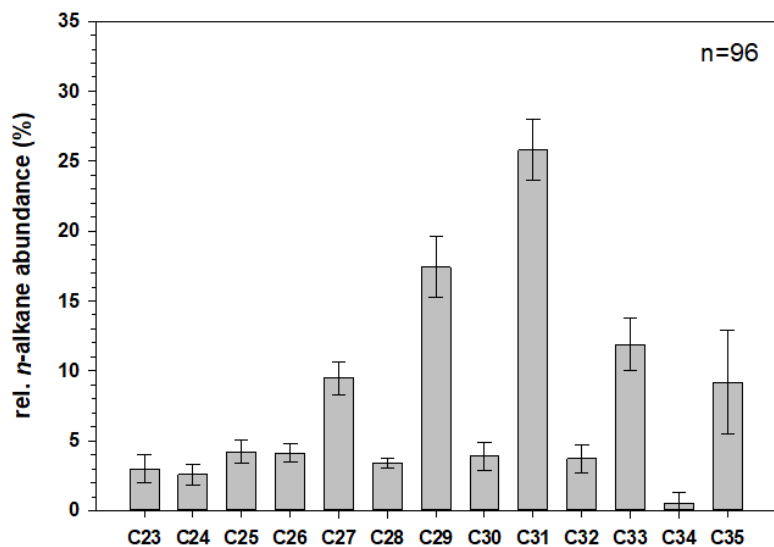


Figure S2: a) Carbon preference index (CPI) of *n*-alkanes 27 to 33 and b) average chain length (ACL) of *n*-alkanes 27-33 of sediment core SO90-63KA. Thick black lines show the five-point running average.



10 Figure S3: Mean relative abundance of the *n*-alkanes 23 to 35 for the sediments (n=95) of SO90-63KA.

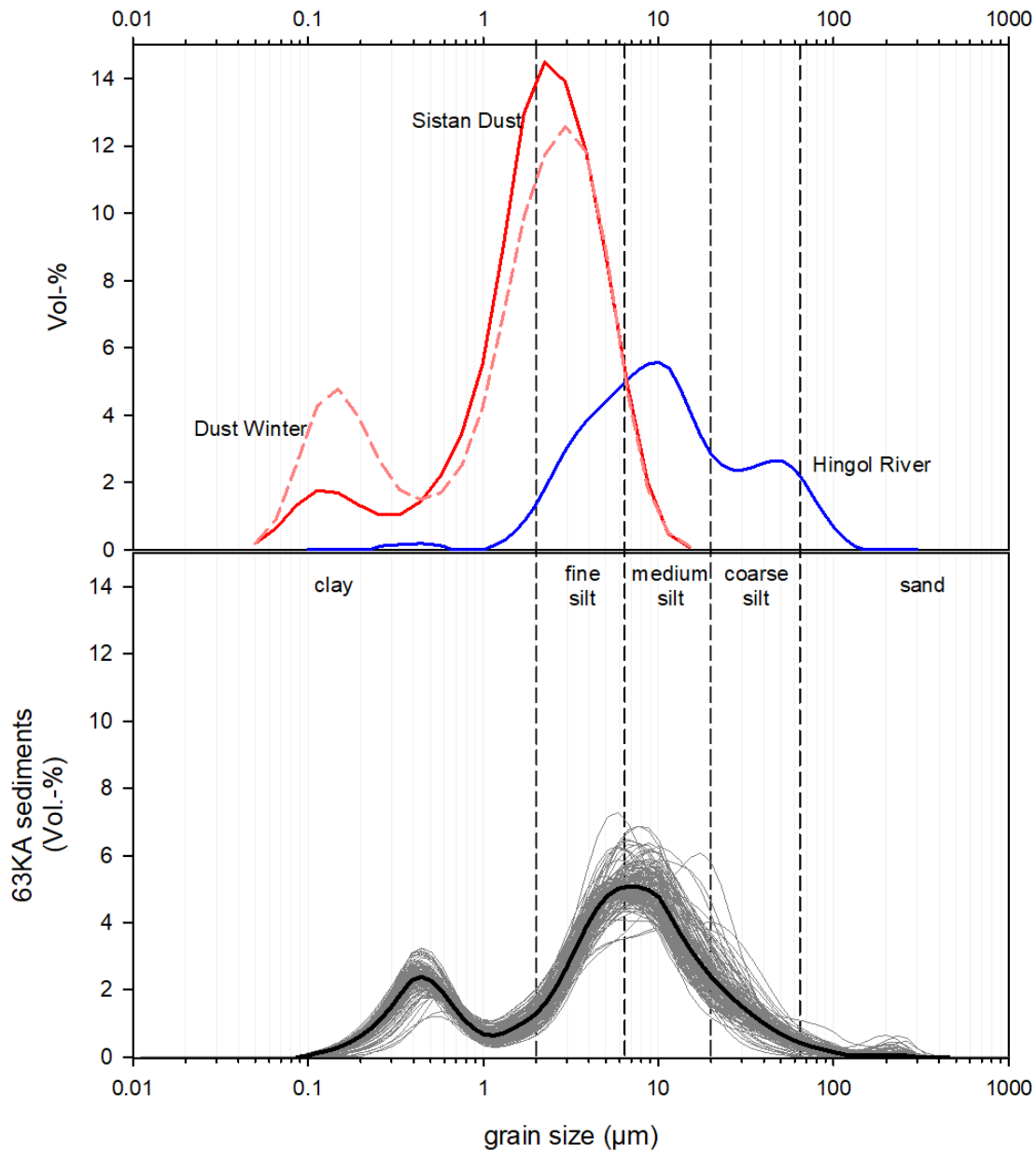
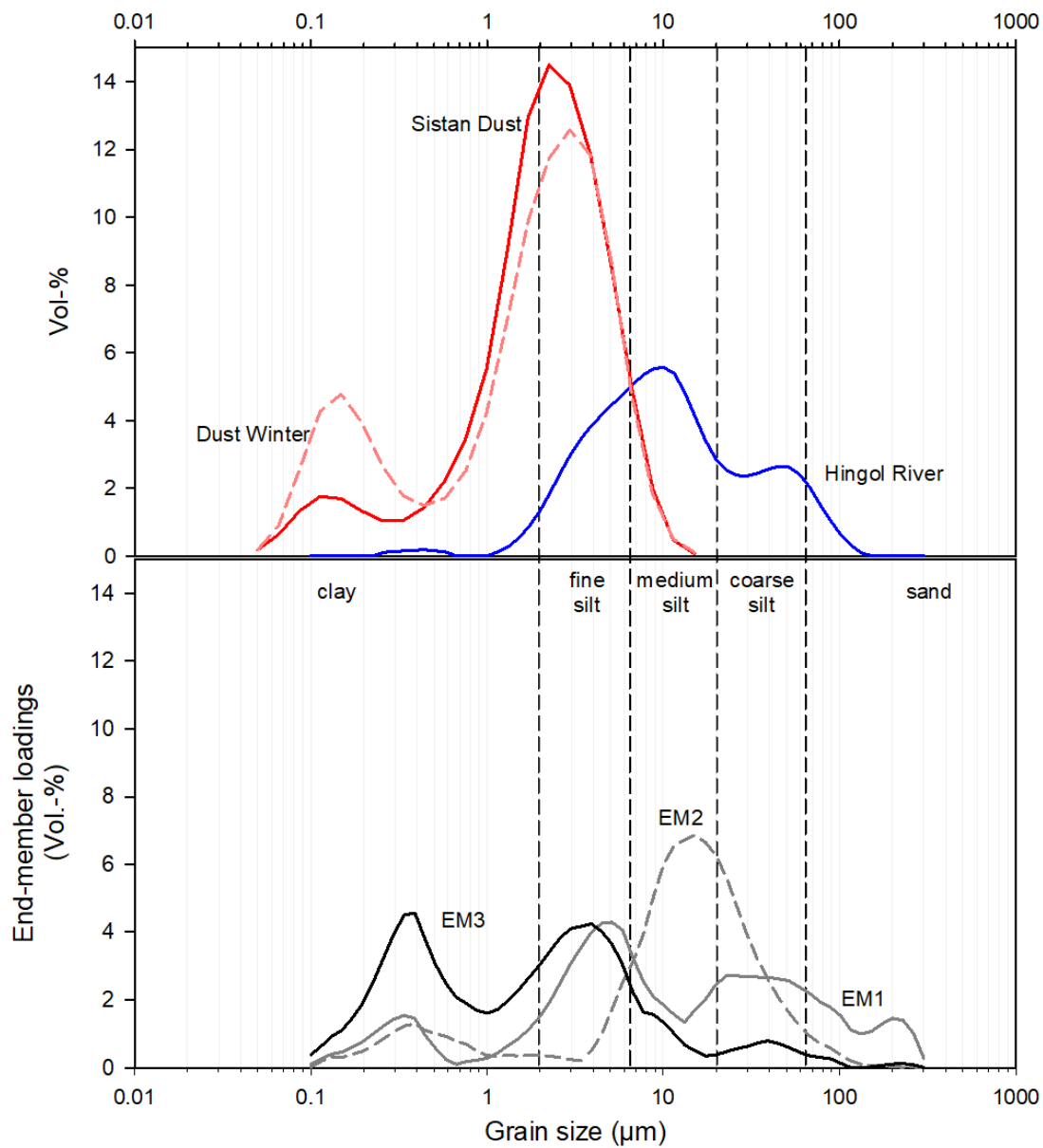


Figure S4: Mean grain size distribution of SO90-63 KA sediments. Grain size distributions of individual samples are shown in grey. Aerosol grain size distribution of “Sistan dust” (red line, June–September) and “winter dust” (dashed red line, November–March) are shown. The aerosol data include averaged monthly grain size distributions from 2006 to 2017 for Karachi (Pakistan) and obtained from the Aerosol Robotic Network (AERONET, https://aeronet.gsfc.nasa.gov/new_web/index.html; Holben et al., 1998, 2001). The blue line indicates the mean grain size distribution of lower Hingol River flood terraces (Forke et al., 2019).

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20 **Figure S5: Comparison of grain size distributions for aeolian Sistan dust and winter dust as well as lower Hingol River flood terraces with modelled end-members of SO90-63 KA sediments.**

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