



A link between North Atlantic cooling and dry events in the core SW monsoon region in Lonar Lake, central India

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A sediment core from Lonar Lake in central India covers the complete Holocene and was used to reconstruct the monsoon history of the core SW-monsoon region. We compare C/N ratios, stable carbon and nitrogen isotopes, grain size, as well as amino acid derived degradation proxies with climatically sensitive proxies of other records from South Asia and the North Atlantic region. The comparison reveals some more or less contemporaneous climate shifts. At Lonar Lake, a general long term climate transition from wet conditions during the early Holocene to drier conditions during the late Holocene, delineating the insolation curve, can be reconstructed. Several phases of shorter term climate alteration that superimpose the general climate trend correlate with cold phases in the North Atlantic region. The most pronounced climate deteriorations indicated by our data occurred between 6.2 – 5.2, 4.65 – 3.9, and 2.05 – 0.55 cal ka BP. The strong dry phase between 4.65 – 3.9 cal ka BP at Lonar Lake corroborates the hypothesis that severe climate deterioration contributed to the decline of the Indus Civilisation about 3.9 ka BP.