



Human-landscape interactions in the northern foothills of Cho Oyo and Mt Everest (Tibet) – a case of anthropogenic land degradation during the Holocene?

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While the earliest conclusive evidence for permanent human occupation of the Tibetan Plateau lays at ca. 8 ka, several sites in southern-central Tibet are suggested to be pre-LGM in age based on their artefact assemblages. Su-re is a quartzite lithic quarry and artefact scatter site on a hillside overlooking a wetland in the northern foothills of the Cho Oyo and Everest massifs and adjacent to a braided river system. The site contains an Upper Palaeolithic stone tool assemblage of purported pre-LGM age based on artefact cross-dating approaches, however there is no direct chronological evidence from artefacts or their sedimentary and geomorphic contexts. Here, we present the results of our geoarchaeological investigations into the site. Firstly, we present stratigraphic and geomorphic data combined with OSL and radiocarbon-based chronologies to reconstruct changes in environmental conditions and describe the site formation processes. Secondly, to derive numerical ages for human use of the site we apply novel luminescence-based dating approaches including OSL-surface exposure dating to date quarry exploitation and OSL-rock burial dating to date artefact production and discard. By integrating the geomorphic site data with absolute ages for human occupation and historical records, we (i) revisit the role of Su-re for understanding early human occupation on the Tibetan Plateau, and (ii) discuss possible impacts of intensive human occupation with environmental degradation in this arid landscape in the shadow of Mount Everest.