

## Glacial geomorphology of the Haizi Shan area, SE Tibetan Plateau

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The Haizi Shan area on the SE Tibetan Plateau is characterized by an elliptical relatively low relief plateau surrounded by steeper fluvial valleys. Glacial deposits and erosive imprints are widely distributed indicating former glacier expansions of varying extents in a presently ice-free area. We have initiated a project on the glacial history of the Haizi Shan area and we here present some initial mapping results. Glacial landforms have been mapped based on remote sensing (SRTM digital elevation model, Landsat ETM+ satellite imagery, and Google Earth) and one short reconnaissance field season. Well-preserved moraines from different stages and distinctive U-shaped glacial valleys are abundant (Fig. 1). In the Daocheng Valley southwest of the Haizi Shan Plateau we have mapped glacial deposits in the form of discontinued moraine ridges at Sangdui village. This line, which might be the maximum Quaternary glacial extent, can be traced for several kilometers along the western side of the valley as dispersed erratic boulders. This implies that during the maximum glaciation, ice from the Haizi Shan Plateau crossed the valley and reached up to the piedmont of the opposite mountain. Smaller in extent than the former, numerous large moraine ridges reach down towards valley floors along the edges of the Haizi Shan Plateau. In several locations these valleys lack cirque heads indicating former outlet glaciers emanating from a Haizi Shan ice cap. We will use TCN and OSL dates of samples collected from numerous ice marginal moraines of the Haizi Shan Plateau to determine a glacial chronology. Hence, using remote sensing, field investigations and numerical dating techniques for the Haizi Shan we aim to advance our knowledge on Quaternary glaciations of the SE Tibetan Plateau.



Fig.1. Digital elevation model for Haizi Shan area, with a preliminary distribution of mapped glacial landforms