

Channel morphodynamics on a small proglacial braid plain (Fagge River, Gepatschferner, Austria)

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Abstract Braid plains are important sediment stores in high mountains, particularly in the glacier forefields of Alpine glaciers. Proglacial braid plains receive sediment input from glacial meltwater and proglacial sediment sources like moraines and glacio-fluvial deposits. The channel morphodynamics on the braid plains are strongly related to the sediment transport and flow regime of the proglacial river. This study deals with channel morphodynamics on a small proglacial braid plain in the European Alps. It focuses on two different time scales. Decadal channel planform changes were assessed by remote sensing approaches. The recent channel bed changes were investigated by cross-sectional surveys and particle counts in 2013. This study is part of the DFG/FWF funded interdisciplinary research project PROSA (High-resolution measurements of morphodynamics in rapidly changing PROglacial Systems of the Alps).

Key words proglacial braid plain; channel morphodynamics; planform changes; grain size; Kaunertal, Austria