



## **The influence of permafrost on paraglacial processes**

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Permafrost studies in recent decades have revealed that permafrost may be more abundant in many more high-mountain areas than previously thought. This suggests that permafrost may be a governing factor not only for periglacial landform evolution in these areas, but also for glacial landform generation. In arctic and mountain areas where glaciers and permafrost co-exist, the thermal regime of ground ice and glacier ice is interrelated. When a glacier is terminating in a permafrost environment, at least marginal parts of the glacier are cold-based, favouring the build up of ice-cored moraines, which may persist over long time periods. The present study illustrates hypothetically the consequences of such glacier-permafrost interaction in the light of landform generation, erosion and particulate sediment transport pattern. In this respect, ice-cored moraines play an important role for the sediment evacuation of recently deglaciated catchments. The study shows how permafrost in glacierized catchments reduces the variability of sediment yield and promotes sediment storage over longer time periods. Sediment magazines in these areas are mobilized during permafrost degradation.