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Glacial geomorphological mapping: a review of approaches and frameworks for best practice

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Abstract

Geomorphological mapping is a well-established method for examining earth surface processes and landscape evolution in a range of environmental contexts. In glacial research, it provides crucial data for a wide range of process-oriented studies and palaeoglaciological reconstructions; in the latter case providing an essential geomorphological framework for establishing glacial chronologies. In recent decades, there have been significant developments in remote sensing and Geographical Information Systems (GIS), with a plethora of high-quality remotely-sensed datasets now (often freely) available. Most recently, the emergence of unmanned aerial vehicle (UAV) technology has allowed sub-decimetre scale aerial images and Digital Elevation Models (DEMs) to be obtained. Traditional field mapping methods still have an important role in glacial