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Quantitative analysis of rock slopes in the Turtmanntal (Central Swiss Alps) using HRSC data

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Rock slopes as sediment storages play an important roll in high alpine areas as a link between rock wall and rock glacier. For a detailled examination rock slopes and their source area were segmented in functionally independent units forming a feature network that holds information about type and orographic neighborhood of each unit. To put source and deposition into relation, geometrical surface and volumes are calculated, the latter for rock slopes by modelling the surface of the underlying bedrock with a local geometric approach. Finally, rock slope and rock wall properties are compared with rock glaciers connected to them.
Distinction between unit types (vegetation, rock deposit, block glacier, rock wall) was derived from multispectral image data (50cm resolution) of the HRSC-Camera in combination with a 1m-Digital Elevation Model, calculated from HRSC data.