

Snowmelt and slush avalanches / slushflows in northern mountains, Sweden. A video presentation

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ABSTRACT. A video of 15 minutes duration reviews different cases of slushflows in May-June 1995 and their behaviour during release and downslope propagation. Slushflow dynamics are compared with other types of mass movement.

CONTENT

Map of ice break-up season in May and June in North Sweden.

1. Mt. Kaisepakte cases of slushflows on 29 May 1995. Erosion, blocking and traffic stop on railway Kiruna - Abisko - Riksgränsen. Video film of slushflow track after the event. Slope profile.

2. Kärkevagge valley near Vassijaure, North Sweden. Reference area of geomorphologic studies of mass movements and other slope processes.

- Slushflow mechanism, time-lapse photos of slushflow front, advancing in 3-4 pulses of flood waves, snow blocks and avalanche erosion with rocks deposited on colluvial fan. Date: 3 June 1995, at 19 hours.
- Triggering of slushflow pulses from snow dammed meltwater reservoir in cirque bottom. 3 - 4 minutes video film sequence of 3 flood pulses of slushflow. Drainage at retrogressive cracking in 4 metres thick snow cover 8 ° inclination. Date 3 June 1995 at 19.17-19.21 hours. Photos of run-out zone. Diagram of triggering pulses at cracking in snow (Hypothesis. Gude & Scherer group, Basel, Switzerland).
- Video film of slushflow inventory at helicopter flight, 7 June 1995. Kärkevagge valley with slushflow traces. Låkta Mountain slushflow from small lake with cracked and shattered ice cover, smashed by snow avalanche. 7 June 1995.

3. Comparisons with other mass movements (photos).

- Slab avalanche with skiers, Swiss Alps.
- Debris slide on solifluction slope. Folded turf at front.
- Large debris slides and flows in birch forest, Ulvådal, Norway
- Rockfalls blocking railway at Mt. Tøtta, Narvik, Norway. September 1995
- Clay slumps with wrecked houses, Vagnhärad, Sweden. May 1996.

Technical production of video at Telia, Malmö, Sweden.