

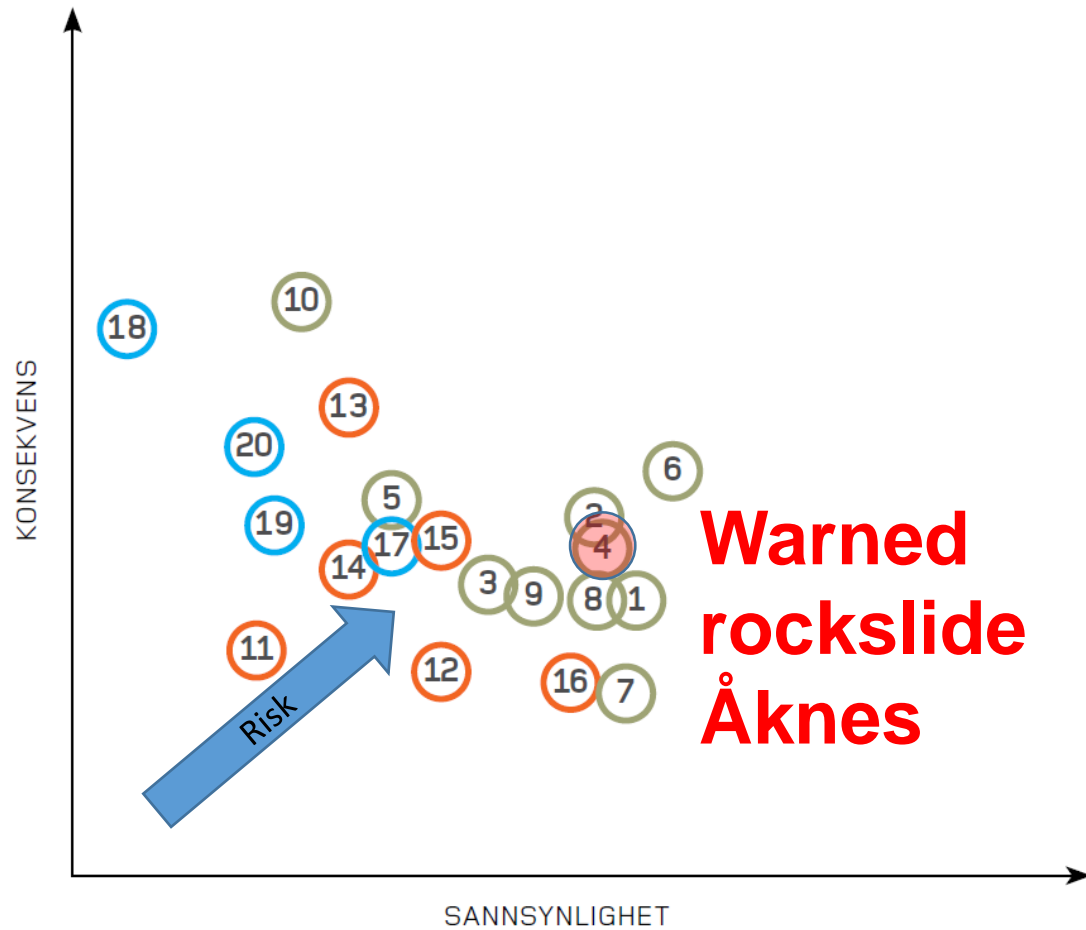
← Water level

Workshop: Drainage of large rockslides

← Sliding



Norges
vassdrags- og
energidirektorat



○ NATURHENDELSE ○ STORE ULYKKER ○ TILSIKTEDE HENDELSER

SCENARIOENE Plassert i Risikomatrikse	
1	Storm i indre Oslofjord
2	Langvarig strømrasjonering
3	Flom på Østlandet
4	Varslet fjellskred i Åkneset
5	Kvikkleireskred i by
6	Pandemi i Norge
7	Tre samtidige skogbranner
8	100-års solstorm
9	Langvarig vulkanutbrudd på Island
10	Jordskjelv i by
11	Gassutslipp på industrianlegg
12	Brann på tanklager i by
13	Atomulykke på gjenvinningsanlegg
14	Olje- og gassutblåsning på borerigg
15	Skipskollisjon på Vestlandskysten
16	Brann i tunnel
17	Terrorangrep i by
18	Strategisk overfall
19	Cyberangrep mot finansielle strukturer
20	Cyberangrep mot ekom-infrastruktur

National risk
«picture»
(DSB, 2014)



Monday 30th of January

12:00 – 13:00: Lunch

13:00 Welcome and introduction. Morten Johnsrud, NVE

Chair: Lars Harald Blikra, NVE

13:15 Åknes overview and status. Lene Kristensen, NVE

14:00 BC Hydro Experience with Landslide Monitoring and Drainage. Thomas Stewart, BC Hydro

14:45 Coffee

15:00 Strategy for the deep drainage of a large rockslide: experience, results and key issues. Davide Bertolo, Geological survey - Regione Valle d'Aosta

15:45 Groundwater flow, stability, monitoring and mitigation in an open pit mine. Kostas Botsialas, Titania AS

16:15 Hydrogeological Conditions at Åknes in a larger Alpine Framework, Simon Löw, ETH Zürich

16:45 Stability of the Åknes rock slope and the influence of water. Guro Grøneng, NGI

17:15 Åknes geological model and challenges related to hydrological conditions. Guri Venvik Ganerød, NGU

17:30 END OF DAY ONE

19:00 *Dinner, Trancher Frogner, Frognerveien 12A*



Tuesday 31th of January

- 09:00 Ground and borehole geophysical measurements at Åknes. Jan Steinar Rønning, NGU
- 09:30 Hybrid Seismic Survey with example from the Gamanjunni rock slope, Kåfjord. Walter Frei, GeoExpert
- 10:00 Discussion of possible geophysical investigations for the drainage project
- 10:30 Coffee
- 10:45 Geological parameters influence on groundwater flow in hard rock. Kristin H Holmøy, SINTEF
- 11:15 Groundwater flow in rock and research activities at NTNU relevant for drainage of Åknes. Randi Kalvskin Ramstad, NTNU.
- 11:30 Structure of the Åknes rock slope – comparable to other sites with drainage? Michel Jaboyedoff, Univ. of Lausanne
- 11:45 Discussion
- 12:00 – 13:00 Lunch

