

# About us - The Norwegian Natural Hazards Gruoup - NNHG

We lobby for preventing the dangers from natural hazards to ensure safer travel on national and county roads throughout Norway

#### Mandate:

- Put the issue of avalanche and rockfall protection on the political agenda
- Overall engaged in natural hazards and road safety
- Lobby for increased funding for protective measures

#### NNHG Board members:

- Politicians from the 8 most avalanche-prone regions (counties) in Norway:
  - Vestland, Rogaland, Møre og Romsdal, Trøndelag, Nordland, Troms, Finnmark, and Innlandet

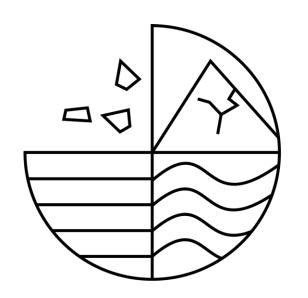


## Norway and the regions









# NORWEGIAN NATURAL HAZARDS GROUP

## Challenges

- Norway is characterized by hundreds of fjords along its coastline and mountain ranges with peaks above 2000 m above sea level
- The steep fjord slopes are prone to natural hazards, particularly avalanches during winter
- Many communities are located at the sea-side and heavily depend on roads along the shore for transport of people, goods and services
- We experience loss of life, damage, loss of business competitiveness and expose ourselves to an unnecessary threat to our civil society

# Preparedness & Climate adaptation - Increasingly important

- Our preparedness depends on the roads being passable, safe, and open. Natural hazards threaten our transportation lines and vital arteries for society
- Climate change will lead to more problems with avalanches and other natural hazards. Avalanche protection is climate adaptation in practice
- This is too important not to be given higher priority
- The Norwegian Directorate for Civil Protection and Emergency Preparedness (DSB) has calculated that 1 krone spent on prevention (i.e. avalanche protection) saves 7 – 14 kroner in repair costs



### Living with fear and uncertainty

- We have thousands of dangerous stretches of roads that treathens to take lives in an instant
- Many live in fear of sending their children to daycare and school along avalanche-prone roads. In fear of commuting past avalanche areas
- Businesses experience unpredictable deliveries and significant losses due to roads being closed for long periods because of avalanches or the risk of avalanches
- We are dependent upon safe and accessible roads in Norway. We cannot afford to lose anyone





# Why are protective measures so important?

- Avalanches take lives, injure people, create fear and insecurity
- A safe road should not be an "extra service," but a prioritized task
- Freight and seafood transports to the market are especially vulnerable
- Closing roads due to the risk of avalanches is not a permanent solution
- Many places lack detour options, and avalanche protection is the only measure to ensure accessibility







# Economic reality bites! The need for us to Switch Strategy

- The financing needed to secure the 500 most dangerous stretches of national and county roads in Norway cost almost 15 billion Canadian dollars.
- A new economic reality and financial situation makes it unrealistic to expect the government to pay for tunnels and avalanche shelters everywhere – and require many decades of funding with today's level
  - For one of our regions, this means a 100 year impossible wait
- We needed to step up our game
- Make ourselves heard and seen
- From big highway projects to getting the most out of the money through stronger focus on technology and innovation



# Solutions – Focus on Technology and Innovation for prevention and prediction

- Road authorities and politician can not afford "tunnel vision" anymore!
- We believe it pays off to invest in prevention and prediction through use of new tech and innovation when and where possible
- Alternative ways to secure against avalanches include monitoring, alerting, closing, blasting, clearing, assessing avalanche risk, and re-opening the road

#### **Pros**

- Acceptable risk level, safer roads, and increased accessibility
- Low investment costs and more climate-friendly
- In reality: the year-round road operation constitute the roads' security
- Provides the opportunity to secure more avalanche points faster at a significantly lower cost

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#### Keys to reaching results in Norway

- Bipartisan long term effort pays off!
- Concentrate on «The Cause» not on single/big highway projects
- Join forces between regional and national level
- Focus on the fear of having to live with constant danger
- Focus on Businesses and loss of predicability, on-time deliveries and safety due to road closures
- Benchmarking and learn from science, road owners, entrepreneurs
  - and best practises from other countries!!
- Sharing information and cooperation with all good forces



