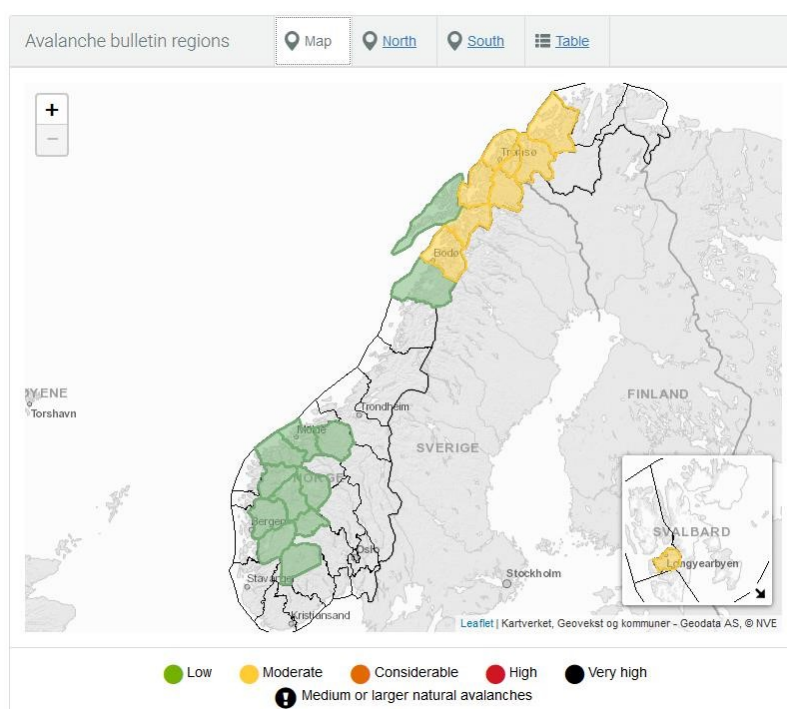


1.11 Avalanche, Flood and Landslide Hazard Warning Service (Norway)

OECD GP Activity	UN SF Activity	UN SD Goals / Targets
1. Natural hazards identification and communication, NH (early) warning systems	4. Enhancing disaster preparedness for effective response	16.10 Ensure public access to information...

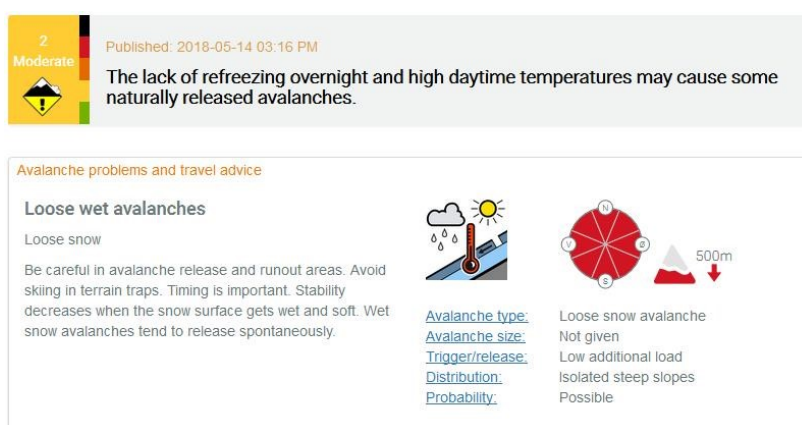
Classification according to OECD Guiding Principles, UN Sendai Framework Priorities/Activities, and UN SDGs and Targets

Figure 1: The Norwegian avalanche bulletin regions



Source: © NVE (<http://www.varsom.no/en/>)

Figure 2: Example of the avalanche problem and travel advice



Source: © NVE (<http://www.varsom.no/en/>)

Short Facts:	Natural Hazard(s) Considered:
Governance approach: Hazard communication Source: Norwegian Water resources and Energy Directorate (NVE), Norwegian Meteorological Institute (MET), The Norwegian Public Roads Administration (NPRA) Entry into force: January 2013 Targeted Stakeholders: The public Scope of applicability: National, regional	• Avalanche • Landslide • Flood Climate change: Not considered

Description

The avalanche, flood and landslide warning service is a collaboration between the Norwegian Water resources and Energy Directorate (NVE), Norwegian Meteorological Institute (MET) and the Norwegian Mapping Authority (Statens kartverk). It provides daily information about ongoing avalanche, flood, and landslide alerts for the Norwegian territory.

During the winter season (1 December 31 May) the Norwegian Avalanche Warning Service publishes daily forecasts of avalanche bulletins, evaluating the hazard on a scale from 1 to 6. The predictions are made before 16:00 for the following two days. In case of high hazard, forecasts are issued before 14:00. During shoulder seasons (from 20 October to 30 November and from 1 to 20 June), forecasts are issued only for high avalanche hazard. Though at high danger levels, forecasts are also issued beyond the defined regions, and field observers are only active in the defined forecasting regions and during the main forecasting season. The defined forecasting regions cover an area of about 5.000 km² on average. For each day and region, the forecasts contain:

- A hazard level and a main message
- Avalanche problems with specific travel and management advice
- Avalanche hazard assessment and a mountain weather forecast

The avalanche problems include the following factors:

- Type of avalanche expected and the expected critical weak layer
- Parts of the terrain most likely to have the problem
- Expected avalanche size, sensitivity to triggering and distribution of the instabilities
- Management advice in terms of identification and handling of the problem

Since 2017, approximately 100 observers and 25 forecasters have helped make the avalanche forecasts. Observers have completed observer training; forecasters have training in observation and regional fore-casting courses. In each forecasting region, 2-3 observations are operated weekly by the observers, while additional observations are undertaken by road management companies contracted by the NPRA.

Information is also provided about ongoing floods and landslides within the Norwegian territory. Forecasts are made on a scale from 1 to 4 for up to three days in advance. They explain the warning level, probable consequences and provide advice.

Link/Contact:

<http://ptwc.weather.gov/>

<https://www.ngdc.noaa.gov/hazard/DARTData.shtml>

Comments by the UN/OECD Natech-Steering Group:

The cooperation of different authorities on one warning system is an asset for the users.

Imprint

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Umweltbundesamt
Wörlitzer Platz 1
06844 Dessau-Roßlau
Tel: +49 340-2103-0
Fax: +49 340-2103-2285

buergerservice@uba.de
Internet: www.umweltbundesamt.de
 / umweltbundesamt.de
 / umweltbundesamt

Authors, Institutions

Lisa Maria Eckart
[eckart\(at\)adelphi.de](mailto:eckart(at)adelphi.de)
adelphi research gGmbH
Alt-Moabit 91, D-10559 Berlin



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