Landslide embankments protect the Loen Skylift on the west coast of Norway. (Photo: NGI)

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New tool comes up with landslide measures

More rainfall and more extreme weather increase the risk of landslides. Public servants and planners in Norwegian municipalities are often well aware of the risk factors, but are unsure of what action to take.

Now, for the first time, they get access to an easy-to-use web-based platform that will help them find appropriate measures. The new platform will be launched on a seminar at NGI on 6th November 2018. Hosting the seminar is Klima 2050, a Centre for Research-based Innovation.

The platform is known as **La**ndslide **Ri**sk **Mi**tigation **T**oolbox, or LaRiMiT for short. It provides an overview of mitigation measures against different types of landslides, primarily focusing on slides caused by water and heavy rainfalls.

LaRiMiT is an efficient tool for everyone working with spatial planning and civil protection. Local and regional planners are among the participants at the launch seminar.

"Using the new platform, you enter key data regarding the area in question. LaRiMiT then comes up with an overview of appropriate mitigation measures in order of priority, explains NGI's Bjørn Kalsnes, who has been responsible for developing LaRiMiT on behalf of Klima 2050.

At the time of launch, approximately 60 mitigation measures are included in the toolbox. The majority are designed to stop landslides. However, LaRiMiT also includes a number of measures meant to reduce damage in case rainfall or flooding result in landslides.

You get a good overview of which measures are available, with the most relevant listed on top. It is what you need to get started with detailed planning," says Bjørn Kalsnes.

LaRiMiT is primarily meant for civil servants, consulting engineers and planners at various levels, such as municipalities, NVE (the Norwegian Water Resources and Energy Directorate), Statens vegvesen (the Norwegian Public Roads Administration) and Bane Nor (responsible for the national railway infrastructure). Some basic landslide knowledge is desirable, but users are not required to be experts.

Tested by Bane Nor

An internal group in Bane Nor has been asked by the Railway Directorate to test LaRiMiT.

"This tool may be useful after a landslide event or when planning for new developments, to get an idea of suitable measures to be taken," said Maria Hetland Olsen, hydrologist at Bane Nor.

Part of Klima 2050

LaRiMiT has been developed by Klima 2050, a Centre for Research-based Innovation financed by the Research Council of Norway. The tool is part of work package 3: Landslides triggered by hydro-meterological processes.

The tool will be expanded with new measures and functions based on user feedback and as part of the development of Klima 2050.

Facts LaRiMiT Short for **La**ndslide **Ri**sk **Mi**tigation **T**oolbox.

To be launched on 6th November 2018.

Accessible to everyone, cost free for the user.

Facts Klima 2050

Klima 2050 – Risk reduction through climate adaptation of buildings and infrastructure.

A Centre for Research-based Innovation financed by the Research Council of Norway.

Established 2015 as a consortium consisting of 20 partners within research, education, governmental institutions and private corporations.

Klima 2050 will reduce the societal risks associated with climate changes and enhanced precipitation and flood water exposure within the built environment.

Financed by the Research Council of Norway and the consortium partners.

Led by SINTEF Byggforsk, headquartered in Trondheim.

More information at www.klima2050.no

The Norwegian Geotechnical Institute (NGI) is a leading international centre for research and consulting within the geosciences. NGI develops optimum solutions for society, and offers expertise on the behaviour of soil, rock and snow and their interaction with the natural and built environment.
NGI works within the markets Offshore energy; Building, construction and transportation; Natural hazards, and Environmental Engineering.
NGI is a private foundation with office and laboratory in Oslo, branch office in Trondheim, and daughter companies in Houston, Texas, USA, and Perth, Western Australia. NGI was established in 1953.

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