



## **Long term behavior of waste rocks piles on mining areas and performance of cover structures**

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MIN-NORTH (Development, Evaluation and Optimization of Measures to Reduce the Impact on the Environment from Mining Activities in Northern Regions) is a EU Interreg Nord program funded cooperation project between Geological Survey of Finland (GTK), University of Oulu (UO), The Arctic University of Norway (UiT) and Luleå University of Technology (LTU, coordinator) to study and reduce the environmental impacts of mining in the northern regions.

The main objective of the project is to study the management of waste rocks of the mining areas in Finnish Lapland. Specific aims include a review of monitoring options on waste rock piles, lysimeter studies of different cover structures, development of geophysical and geochemical research methods, measurement of the thermal flux in the waste rock piles and tracking the contaminant sources and pathways with isotopes. Monitoring studies with lysimeters are carried out year-round. The performance of different cover structures will be investigated and evaluated. As a comparison, ARD (acid rock drainage) generation and element release from waste rock piles without a cover will also be monitored at a closed mine site in northern Finland. The implementation time of the project is 2016-2018, so the results will be available in the end of this year. Additional information can be found from the project web-pages (<http://www.gtk.fi/tutkimus/tutkimushankkeet/min-north/index.html>).