

Building trust – how to improve the communication between mining industry and society

EIT RawMaterials MineFacts Project and The Finnish Mine Water Excellence Network joint seminar

Program

- 9:00–9:20 Opening and MineFacts project, **Laura S. Lauri**, Geological Survey of Finland
- 9:20–9:50 Why mining in our back yard may be important for making a better world, **Karen Hanghøj**, EIT Raw Materials
- 9:50–10:05 29 municipalities, lots of travel and good discussions, **Niclas Dahlström**, LTU Business AB
- 10:05–10:20 Earning the trust from a “to be” mining municipality in northern Norway, **Øystein Rushfeldt**, Nussir ASA
- 10:20–10:35 coffee break
- 10:35–11:05 Finnish Network for Sustainable Mining: past experiences and future prospects, **Eero Yrjö-Koskinen**, Finnish Network for Sustainable Mining
- 11:05–11:45 Mining industry and the municipalities
- **Anna Kantola**, Sodankylä, Finland
- **Markku Norrena**, Ylitornio, Finland
- **Anna Kumpula Kostet**, Pajala, Sweden
- 11:45–12:00 Building trust – a must, **Emma Härdmark**, SveMin
- 12:00–12:40 Lunch

Program (cont.)

- 12:40–13:00 Mine water network and KaivosVV project, **Kaisa Turunen**, Geological Survey of Finland
- 13:00–13:30 Topical challenges and recent advances in the environmental management of mines, **Soile Backnäs**, Kainuu ELY-Centre
- 13:30–13:50 Talvivaara mine and water pollution: Policy analysis of conflict process, **Rauno Sairinen**, University of Eastern Finland
- 13:50–14:05 Risk assessment as a tool to deserve social license in mine industry, **Ilkka Miettinen** and **Marjo Niittynen**, National Institute for Health and Welfare
- 14:05-14:20 **Ilkka Keskitalo**, Finnish mining authority Tukes
- 14:20-14:30 Discussion
- 14:30-15:00 Publication of the MEE Mining Industry sector report 2017, **Heino Vasara**, Lapland ELY-centre

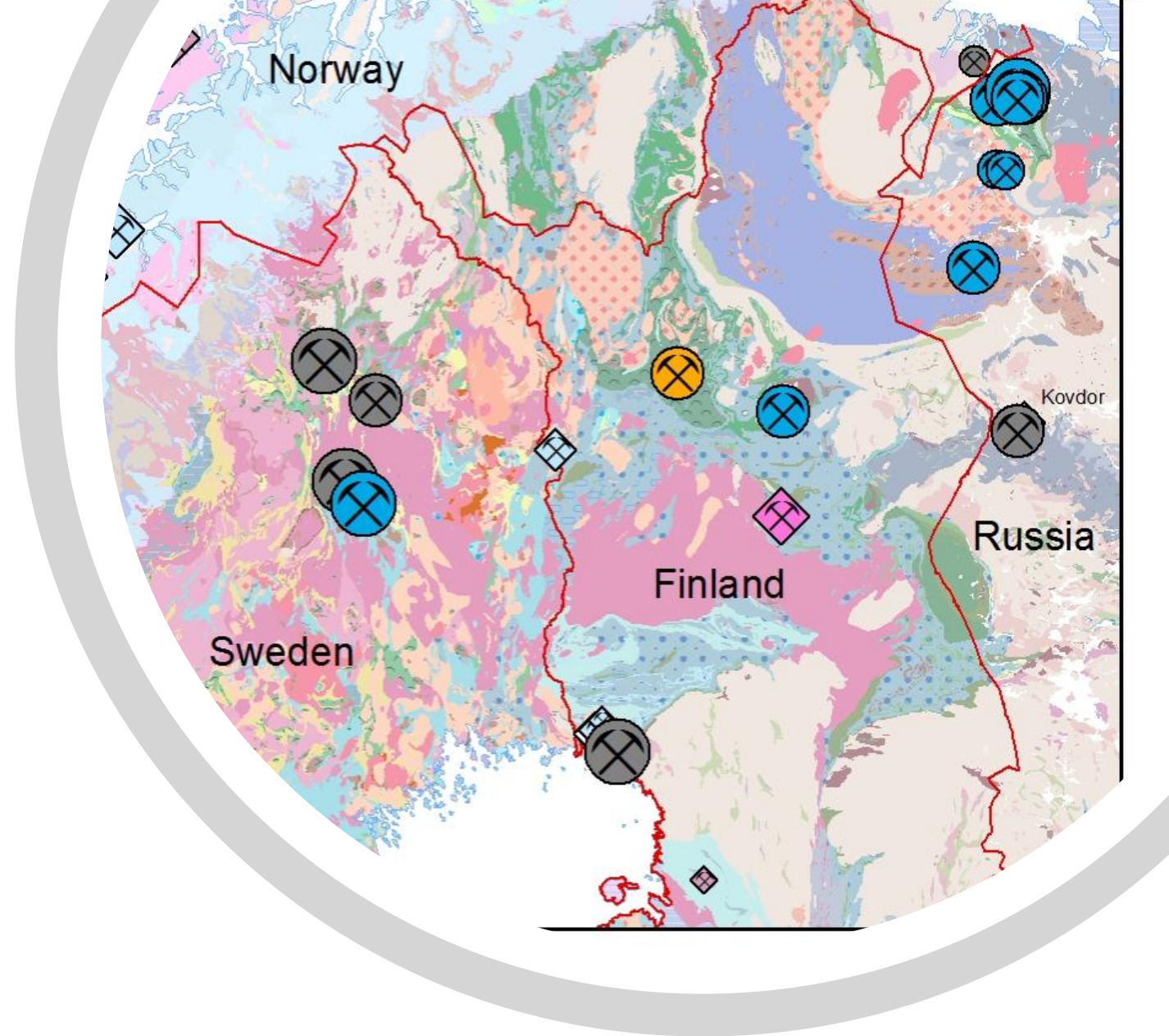
Building the social license to operate through offering facts on exploration and mining – a roadshow for municipalities and communities

MineFacts

GTK

Laura S. Lauri, laura.lauri@gtk.fi

duration of project from 2017 to 2018



Why MineFacts? Do we need them?



"I don't get these fancy stereograms"



"Look through these red-green glasses"



"Oh, it's just another capitalist raping the nature"

MineFacts is about educating the municipalities on mining industry and spreading knowledge

- Municipality personnel needs information about exploration and mining to be able to make informed decisions about land-use, economic factors etc.
- Neutral, fact-based information about mining industry, the process from exploration to mining, environmental aspects and legislation help to facilitate the discussion between the municipalities and the companies working in the scope of mining
- MineFacts is about finding out what answers the municipalities need and how to provide them
- Neutral, fact-based information is provided by experts from research centres, universities etc., with both mining companies and municipalities being involved in the project



General MineFacts

EIT RawMaterials project

Leading partner: Geological Survey of Finland GTK

Contact person: Laura S. Lauri, laura.lauri@gtk.fi / Hannu Panttila, hannu.panttila@gtk.fi

Partners: LTU, LTU Business AB, Boliden AB, SGU, University of Lapland, Sodankylä, AA Sakatti Mining Oy, Nussir ASA

Duration: 1.1.2017-31.1.2018

Main thematic area: Wider Society Learning

MineFacts outputs

- MineFacts will provide **information** about mining industry for **municipalities** in Finland, Sweden and Norway in their own languages
- The English version of the information material may be seen as a how-to-do-it-kit for exploration and mining companies working in northern Europe
- The **list of questions** that need answers has been collected from municipalities in Finland, Sweden and Norway
- The MineFacts **roadshow** has visited two municipalities in Finland, one in Norway and thirteen in Sweden (in a common event held in Luleå), in addition to which the project has been discussed with all municipalities in Norrbotten and Västerbotten in Sweden
- The MineFacts **workshop** in Levi, Finland on **October 31, 2017** is targeted to the stakeholders in the Nordic mining community
- The MineFacts model of providing **fact-based, neutral information** to the municipalities may be applied to other parts of EU

7. Gruvans livstid och miljöpåverkan

Gruvor kan ha en stor effekt på miljön, både på landskapsbilden och den kemiska miljön. Hur länge är en gruva i drift, och hur ser miljöpåverkan ut från den under och efter drift?

GRUVANS LIVSTID

Gruvverksamhet drivs i huvudsak så länge det finns lönsamhet i utvinnigen och fyndigheter kvar att bryta. Lönsamheten styrs till stor del av råvarupriserna.

Det är vanligt att gruvbolaget prospekterar nära gruvan under driften. Under driften byggs kunskapen upp om geologin i området och kring fyndigheten. Det är inte ovanligt att ytterligare information om fyndigheten och närområdet gör att mer malm hittas nära gruvan. Antalet år som gruvan kommer vara i drift brukar bestämmas av gruvans malmbas. Malmbasen är de kända fyndigheterna av malm, ofta uttryckt i miljoner ton. Malmbasen delat på bruten malm per år ger gruvans livstid vid tidpunkten för beräkningen.

Som exempel har en gruva med 100 miljoner ton malm och en brytningshastighet på 5 miljoner ton om året en livstid på 20 år. Om gruvnära prospektering leder till fynd på ytterligare 50 miljoner ton malm så kommer gruvans livstid utökas med 10 år, om produktionshastigheten är densamma.

Vid en nystartad gruva anges ofta hur länge den kommer vara i drift, men det behöver inte nödvändigtvis vara korrekt då det endast återspeglar den malmbas bolaget har för tillfället. Vid flera platser i Sverige har gruvdrift funnits väldigt länge, även om man tidigare trott att det inte fanns någon malm kvar. Med ändrade råvarupriser kan även berg som tidigare sågs vara ointressant bli intressant att bryta. Även ny teknik bidrar till detta. Flera dagbrott har med tiden utvecklats till underjordsgruvor då mer malm hittas på djupet.



Figur 7. Garpenberg är Sveriges äldsta gruvfält och har brutits sedan 1300-talet, troligen längre. Idag är det en av världens modernaste gruvor! Bild: Boliden.

Feedback from the municipalities: questions for consideration

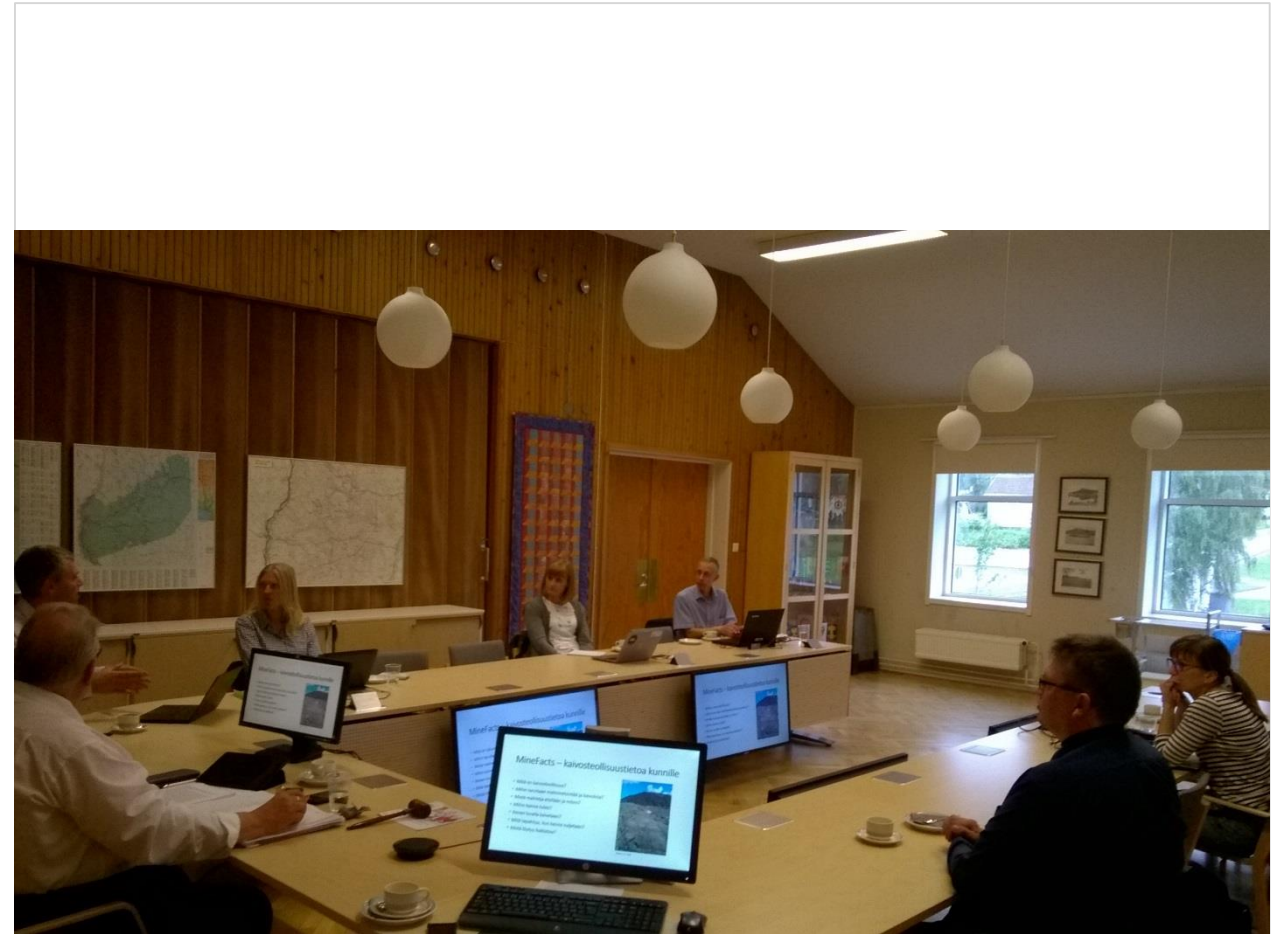
- Why does it take so long to know if there will be a mine or not?
- What is the role of the municipality?
- Legislation process and the money involved?
- Dam safety and other technical solutions?
- What happens after mining is finished and who pays for it?
- Which commodities are needed now and in the future?
- Good and bad examples?
- Will there be jobs for the local people and what will they be?
- "Not in my backyard"
- How large is the mining area in our municipality/region/country/EU?



Outokumpu mine, present state. Photo: GTK

MineFacts impact

- Municipalities get to ask the **questions** they have and gain **knowledge** on the aspects of mining industry that are important to them
- Open discussion about the **good and bad** things associated with mining industry increases trust between the different stakeholders
- MineFacts presentation material offers **neutral facts** about exploration and mining to help the municipalities make informed decisions
- **Discussion** between municipalities in different phases of the mining cycle (exploration, mining, mine closure) increases overall knowledge and offers a chance to network and share experiences



MineFacts roadshow meeting in Ylitornio, Finland (photo: Laura S. Lauri)

Lessons learned so far...

- Yes, the municipalities generally are interested in this form of information sharing
- And, based on the interest in the seminar in Levi, so are many other stakeholders
- Like we thought from the beginning, people need information in their own language
- The questions that have come up during the roadshow phase give us good guidelines for building the final version of the educational package
- Multidisciplinary team is the right (and only!) way to do this, as:
 - Geologists tend to think everybody is interested in earth science
 - Mining engineers are simply too pro-mining
 - Economists don't know enough about earth science
 - There should be a sociologist in every group to keep the others focused
- ...and we need to start thinking about taking MineFacts to the next phase...

Thank you for your attention!

