

# Business and research opportunities from mine water

## KaivosVV-project

Kaisa Turunen GTK

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Pohjois-Savon liitto tukee  
maakunnan  
menestystä



Programme for Sustainable Growth and Jobs

Leverage from  
the EU  
2014–2020



European Union  
European Regional  
Development Fund

# Mine water challenges

**Water is the greatest pathway for mining related contaminants and water management is globally one of the most challenging stress factor in mining and minerals processing industry**



- Mining companies need to seek for mine water experts from variety of organizations
  - How to find suitable solutions for each mine?

# Mine water challenges

- Water treatment and monitoring technologies have improved within last decades
  - Still, the used techniques date mostly back to developments in the last century
  - Novel technologies take approx. 8 years to be in the market and even longer to be used at industrial scale
  - Most of the novel solutions by start ups and SME's, which have no access to mines or readiness for piloting
    - How to get innovations tested and verified?



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# Mine water challenges

Romanian village blocks Canadian firm from mining for gold

- Good news is no news?
  - The public discussion on mine water does not always rest on reality
  - Research findings and technological breakthroughs won't reach the public attention
    - Popularisation?
  - Encouraging transparency and stakeholder commitment
- Mine water issues require multidisciplinary expertise that cannot be covered by single organization or a small consortium



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# KaivosVV-project 2015-2017

- Finnish Mine Water Excellence Network was established in 2014 among Eastern and Northern Finland partners
  - The Network got funding in 2015 from The Regional Council of North Savo for developing and to start up the network

Terrafame Group

Sulfatar

SANSOX

CH  
CHEMEC

EPSE  
Global Espoo Services

**Novel  
treatment  
methods and  
technologies,  
end-users**

Industrial  
partners and  
Mining companies



**GTK**

**Development of  
groundwater  
monitoring and  
measurement to  
enhance mine  
water  
management**

Geological  
Survey of Finland



**SAVONIA**

**Piloting of new  
water treatment  
methods and  
development of  
challenging pilot  
arrangements**

Savonia  
University of  
applied science



UNIVERSITY OF  
EASTERN FINLAND

**Development  
and piloting of  
continuous on-  
line monitoring**

University of  
Eastern Finland

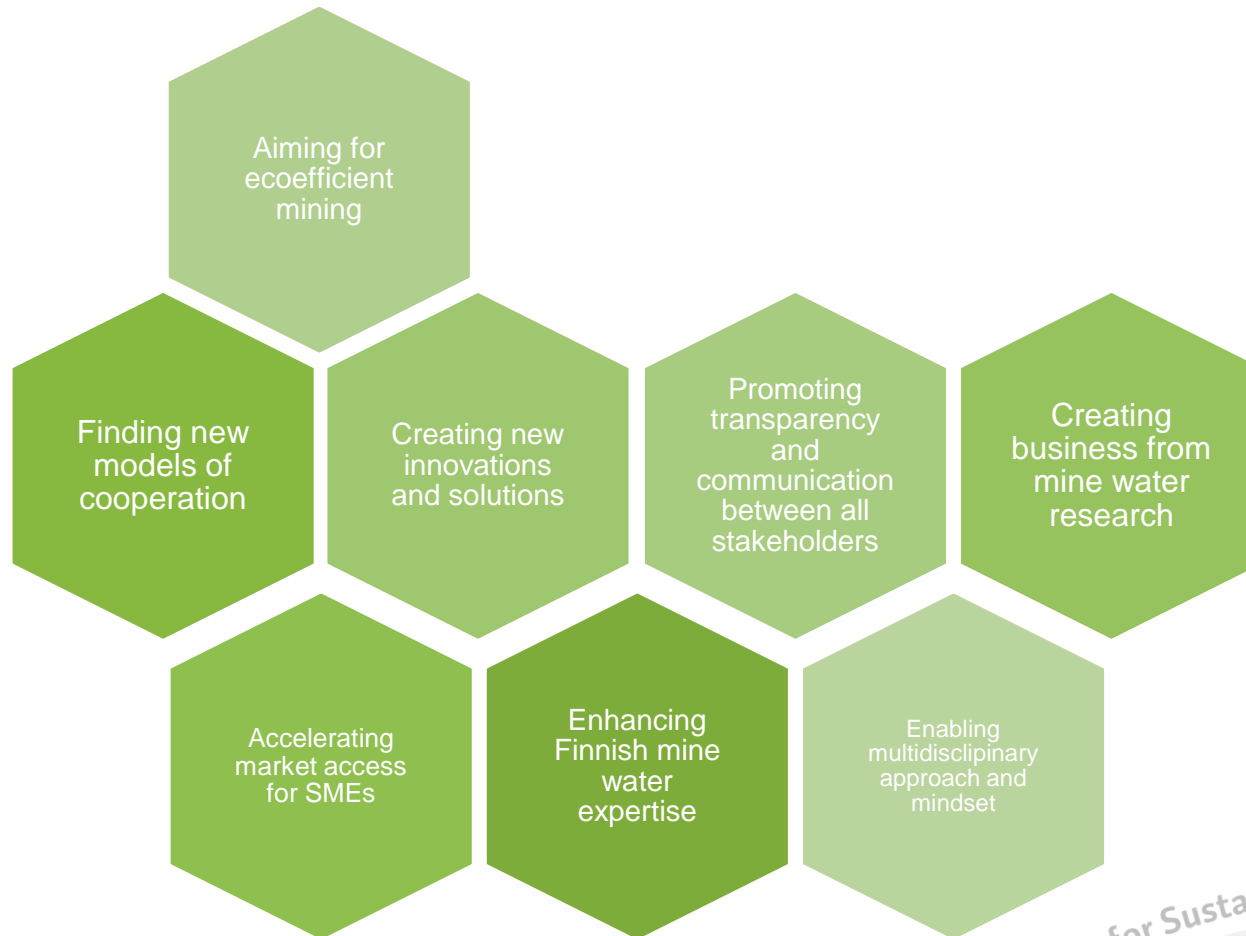


**THL**

**Development  
and piloting of  
quantitative risk  
assessment  
model for mine  
waters**

National Institute  
for health and  
welfare

# Finnish Mine Water Excellence Network



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# What can we offer?

- For the mining companies
  - Piloting of new technologies and methods tailored for each site
  - Coupling the latest innovations and multidisciplinary research
- SMEs
  - Their innovations and technologies piloted and developed at mine sites in cooperation with research partners
- Training, education
  - BAT, BEP
- ...

Sustainable Growth and Jobs



# Where we stand among other networks?



- *Finnish Network for Sustainable Mining* includes all aspect of mining not just mine waters
  - Guidance, responsibility agreements and practises etc.

FINNISH WATER FORUM



- *Finnish Water Forum* represents the whole variety of Finnish water sector not just mine waters
  - Promoting and exporting Finnish water expertise

- *Finnish Mine Water Competence Network* provides concrete piloting and research at mine sites
  - "We'll get our hands dirty"





# Finnish Mine Water Excellence Network

Gathers together Finnish organizations, service providers, mining companies and authorities



The network is open for all organizations involved in mine water sector.  
For more information:

Kaisa Turunen, network coordinator, Geological Survey of Finland  
kaisa.turunen@gtk.fi  
tel. 050 348 6324  
<http://projects.gtk.fi/kaivosvesiverkosto/index.html>

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