



Nordic Mineral-related Education and Research

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Nordic Mining School

Funded for 2008-2012 by INTERREG IVA Nord

Aims:



To bring the students at masters level in both universities together – critical mass



Build the best graduate school in mining related education in Europe




Strengthen the research cooperation in mining, exploration and environmental engineering, mineral processing, metallurgy, process engineering



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 Operational autumn-09


 1-3 students/university annually travel

 Increase teacher exchange, distant learning coop.

 Joint professor in "Mineral entrepreneurship"



 Students enroll in a relevant masters programme at either of the universities and spend at least 6 months of your studies at the other university and qualify for a double degree from the Nordic Mining School

 Opportunity for an internship where European mining is active and write a masters thesis co-supervised by mining, mineral, metallurgical or exploration industry

Luleå

Oulu




 Courses at masters level

 Courses in:

- exploration and environmental geosciences
- metallurgy
- mining engineering
- mineral processing
- process engineering

 Curriculum in English

 A double masters degree

Luleå

Oulu



Universities in the Nordic countries with Economic geology & Mining profile:

Core group within Barents

- Luleå Tech. Univ. (S)
- NTNU (N)
- Oulu Univ. (F)
- Tromsø (N)

Other

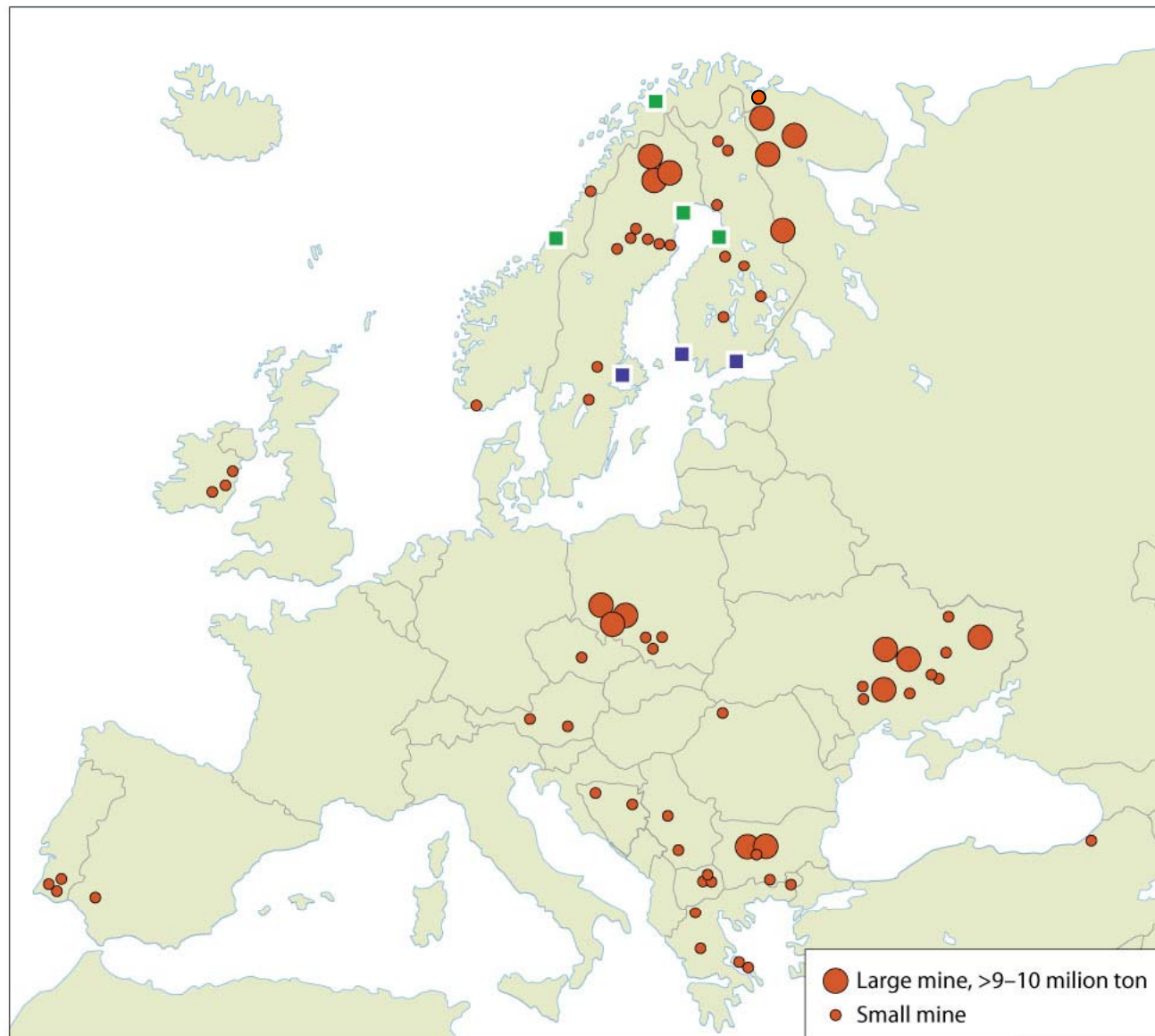
- Helsinki Uni. (F)
- Stockholm Uni. (S)
- Turku Uni. (F)
- Uppsala Uni. (S)
- Århus Uni. (D)

Geological Surveys

- GEUS (D & G)
- GTK (F)
- NGU (N)
- SGU (S)

Institutes


- SINTEF (N)
- Swerea Mefos (S)






Extended High North Research and Education Collaboration

(Beyond NMS & OMS)

 Through the Barents cooperation several workshops the last few years have identified the need

 An exploratory workshop held in Luleå in Sep. 2011 identified a roadmap

 Strong support from political level to build High North RDI & educational collaboration



A Competence Centre for Sustainable Exploration, Extraction, Processing and Utilization of Mineral Resources, with emphasis on the European High North region

“SusMin”

Prepared by Jack Ødegård (SINTEF, Norway), Pär Weihed (LTU, Sweden),
and Pekka Nurmi (GTK, Finland)



Extended High North Research and Education Collaboration (Beyond NMS & OMS)

The ultimate long-term goal and expected outcome of the SusMin centre.

- To develop a mineral competence centre in the European High North region by pooling expertise in Nordic countries and Russia in exploration, extraction, processing and utilization of mineral resources.
- Comprise leading universities, R&D institutions, geological surveys and industry partners. The centre shall develop into a permanent RDI (research, development and innovation) instrument.
- Focus on increased processing of raw materials within the region.
- Providing a fundamental input to the growth of sustainable societies in the Barents/High North, offering a variety of job opportunities, attractive both for men and women.



Extended High North Research and Education Collaboration

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The objective will be achieved by:

- Further developing and strengthening of the relevant competence base within a cross-border, regional context by the establishment of the *SusMin* centre.
- Amplifying each nation's strengths through the establishment of cross-border innovation mechanisms.
- Supporting education and competence-building through joint PhD educational programs.
- The creation and execution of R&D programs on a precompetitive level, promoting the region as a strong player in relation to the EU Raw Materials Strategy.
- Furthering societal, cultural and knowledge-bonding by expert exchange programs.



Extended High North Research and Education Collaboration

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Partners:

The centre shall be open to universities, R&D institutions and industry partners with recognized knowledge and experience on the given and prioritized topics (to be decided). In the preparatory phase the core group has been represented by:

- SINTEF
- Norwegian University of Science and Technology, NTNU
- University of Tromsø, UiT
- Geological Survey of Norway, NGU
- Luleå University of Technology, LTU
- Geological Survey of Sweden, SGU
- University of Oulu, OU
- Geological Survey of Finland, GTK

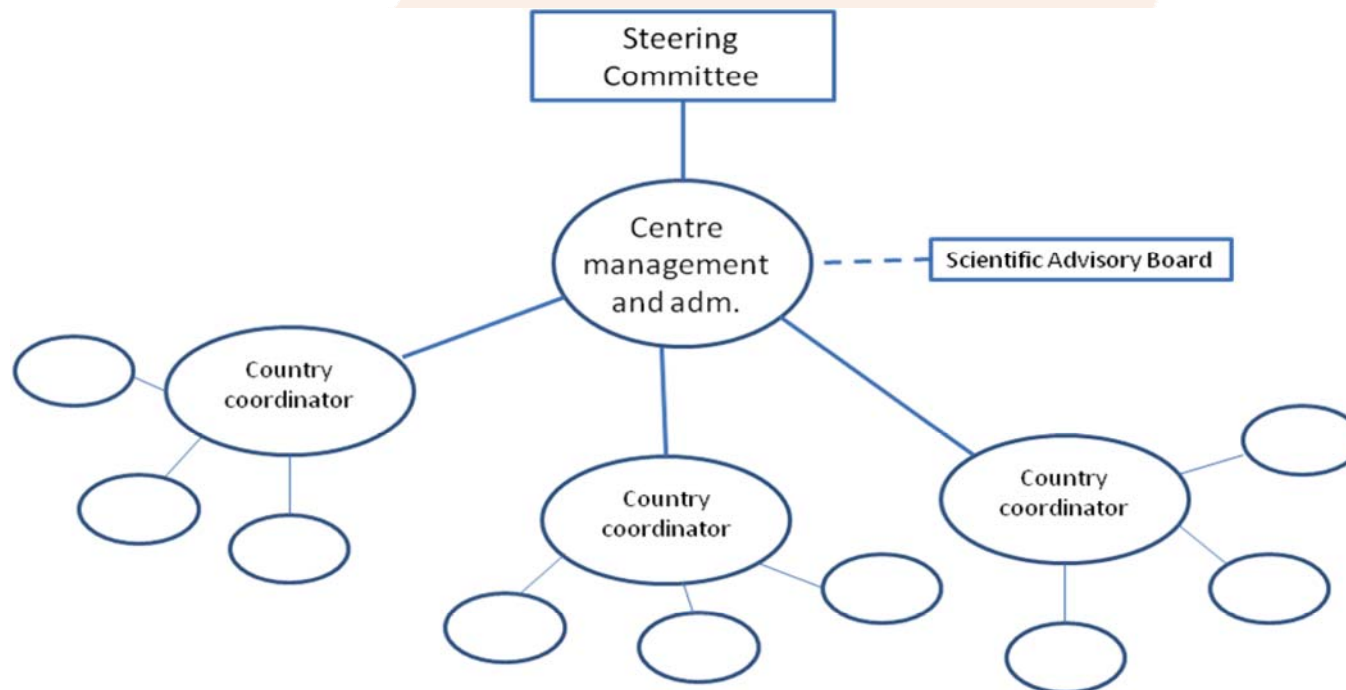
Luleå

Oulu



Extended High North Research and Education Collaboration (Beyond NMS & OMS)

SusMin organisation





Extended High North Research and Education Collaboration (Beyond NMS & OMS)

Rough timeline for the SusMin establishment.

Phase/Time	Activity
Phase 0/Q3-Q4 2011	Secure commitment amongst the nations and partners of interest. Secure governmental funding for the establishment phase (500 000 €).
Phase 0b/Q1-Q4 2012	Establishment phase and road-map development <ul style="list-style-type: none"> - Governance structure and organisation - High-level thematic priorities - Relation to national strategies - Centre leader to be appointed - Activity planning - Financing - +++
Phase I/2013 -->	Operational phase; Education and RDI programmes (realization, harvesting - define and implement activities)
Phase II/2020 -->	"The next dimension" (the realization and maturing of new mining concepts, technologies, value chains, businesses, ...)



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“SusMin”

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