

Sustainable transports

– BARENTS TRACK

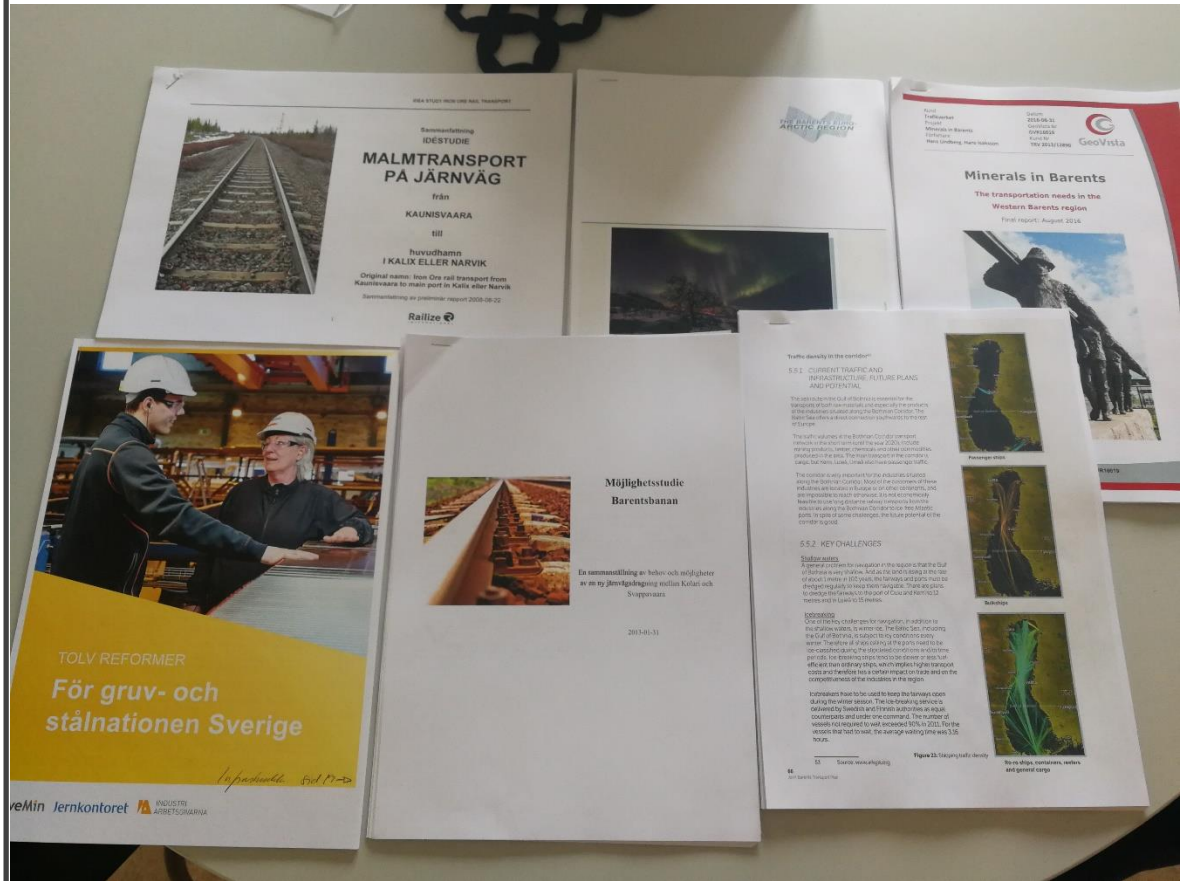


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TAPULI 2012



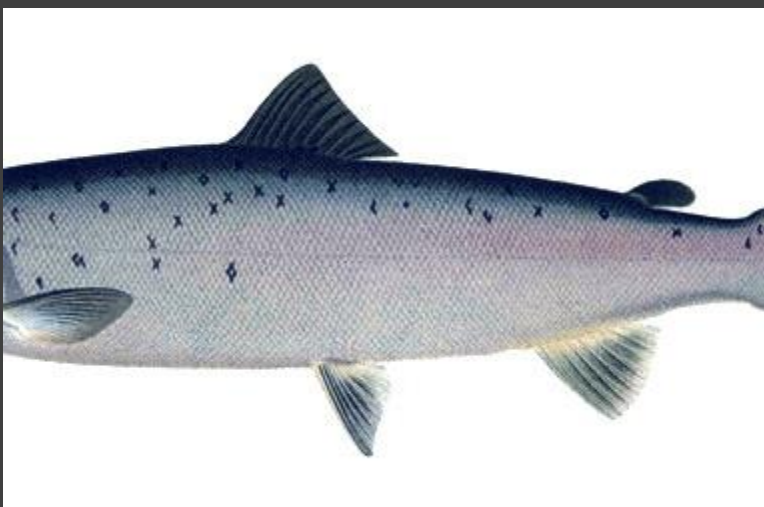
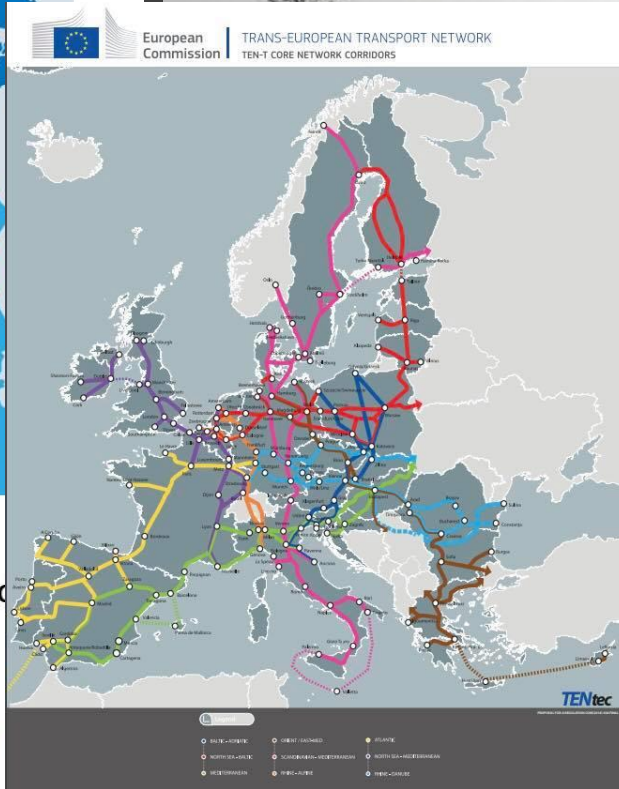
REPORTS OF NEED OF TRANSPORT- SOLUTIONS





Basindustrierna i norr:
Starkt konkurrensförmåga kräver ökad
tillgänglighet

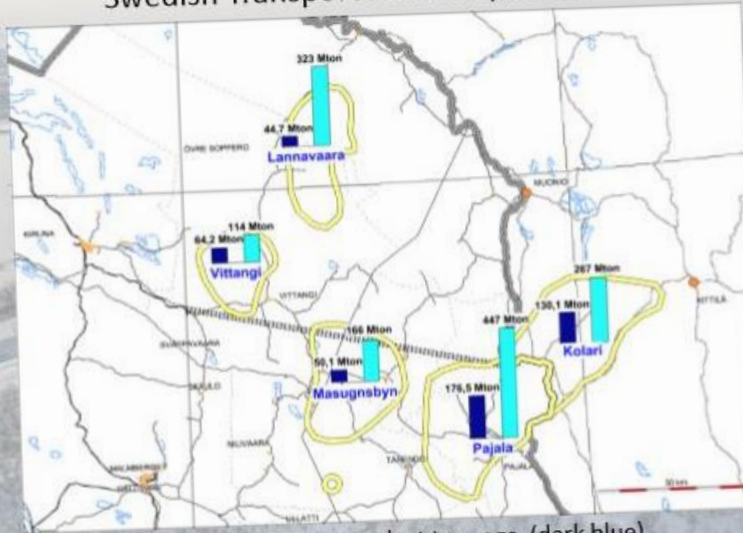
SVEASKOG **LKAB** **BOLIDEN** **SSAB**



**FROM MANY
DIFFERENT ANGLES**

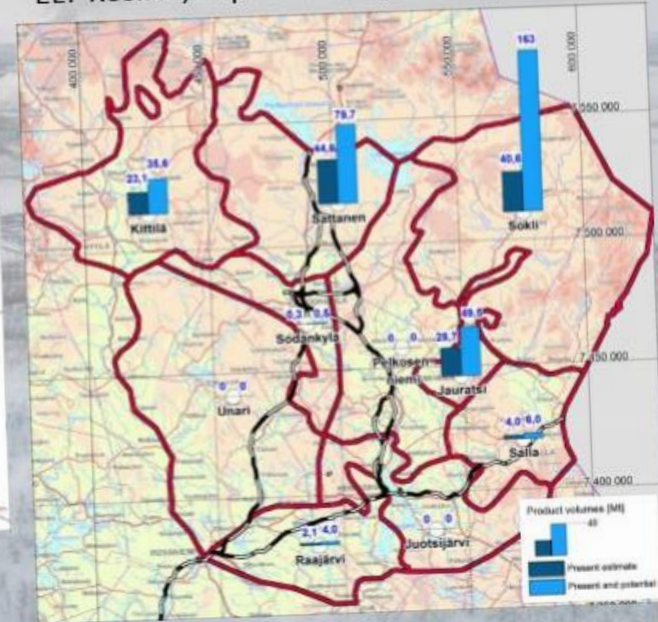
Detailed studies of railway corridors

Pajala – Svappavaara, Sweden
Swedish Transport Authority, 2013



Both figure show known product tonnage (dark blue) and known + potential product tonnage (light blue). Different scales of bars.

Rovaniemi or Kemijärvi – Sodankylä, Finland
ELY Keskus, Lapland & Lapin liitto, 2015



- Known and potential mineral resources can justify selection of corridor
- Resource efficiency – Existing infrastructure is one of the keys in development of mineral resources
- Avoid building infrastructure on top of known deposits
- Combine with other industries and interests

SWEDISH
TRANSPORT
ADMINISTRATION
—
GEOVISTA

Kund
Trafikverket
Projekt
Minerals in Barents
Författare
Hans Lindberg, Hans Isaksson

Datum
2016-08-31
GeoVista Nr
GVR16019
Kund Nr
TRV 2013/12890



Minerals in Barents

**The transportation needs in the
Western Barents region**

Final report: August 2016



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Minerals industry – key drivers

- Exploration is key to development
“You don’t find minerals where you search – you search where you find”
- Controlling parameters to attract exploration
 1. *Geological potential*
 2. *Political risk*
 3. *Minerals legislation*
 4. *Infrastructure*
 5. *Access to capital*
 6. *... and of course also Market conditions*



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5

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3. Minerals legislation

- Minerals legislations in Sweden, Finland and Norway are considered among the best in the world
- All countries have national minerals strategies
- EU Minerals strategy from 2008 /European Commission, 2008/, which is based on three pillars:
 - ✓ Fair and sustainable supply of raw materials from global markets
 - ✓ Fostering sustainable supply within the EU
 - ✓ Boosting resource efficiency and promoting recycling

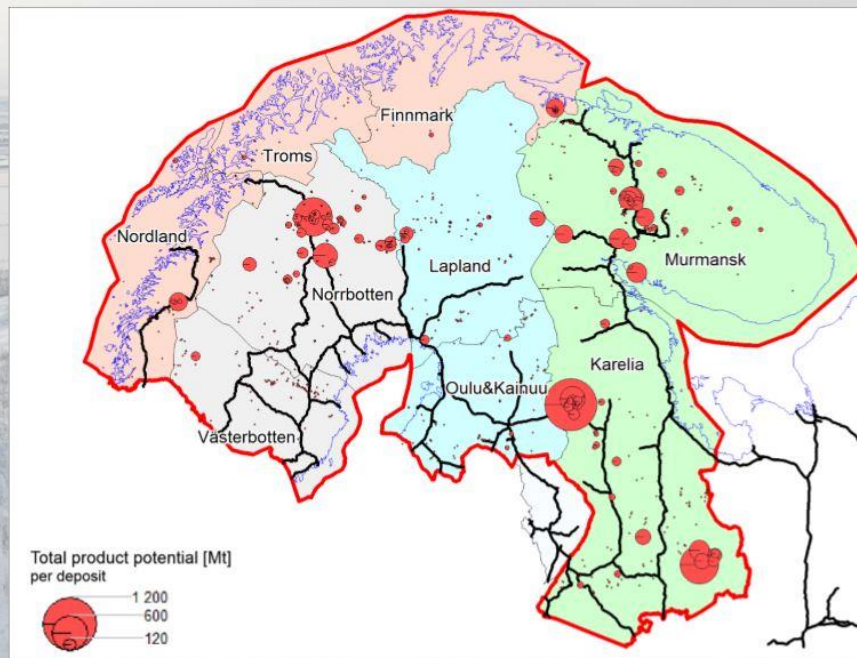


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8

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Estimated potential - total



Scope 2 - potential: Metallic mineral deposits (only)
Product potential per deposit



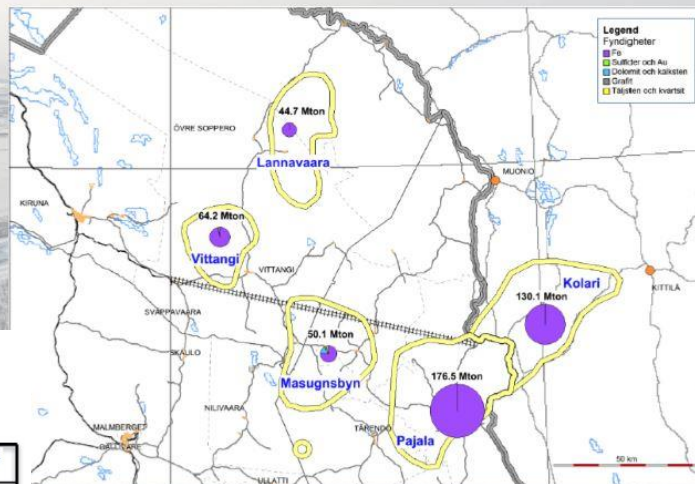
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16

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2,3 billion tons

Här finns slumrande rikedomar



am utvisande fördelningen av känt tonnage "produkter" för de fyndighetskluster samt fyndighetsslag.

* Mton = miljoner ton

	Råmalm [Mton] *		Produkter [Mton] *	
	Kända tonnage	Kända och Potentiella tonnage	Kända tonnage	Kända och Potentiella tonnage
Totalt järn	949,2	1293	451,6	640
Totalt sulfider	5,0	279	0,1	11
Totalt karbonater	7,4	596	7,4	596
Totalt grafit	21,2	71	3,8	17
Totalt övrigt	5,0	56	2,5	53
Totalt alla material	987,8	2294	465,5	1317

POTENTIAL CRUDE ORE NEXT TO BARENTS TRACK

4. Infrastructure

- Existing infrastructure (railways, roads, ports, power lines etc.) is key to the economic development of a deposit
- Ongoing improvement of capacity – Malmbanan, other railways and harbours
- On-going integration of transport systems (European perspective), with concentration to certain transport corridors and nodes
- Future trends towards commuting, fly in - fly out, bulk ore is not for flying
- **Planning of infrastructure is the one parameter which we ourselves best can influence to stimulate mineral development in the region!**

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Summary of studies

- **Mineral potential in the Western Barents region is huge**

Short term, knowledge of industrial and metallic mineral resources, which in 10 years could yield:

400 Mt of crude ore / equivalent to 120 Mt of products on an annual basis

Longer term, indications of metallic (only) mineral resources, which potentially can yield in total:

47,000 Mt of crude ore / equivalent to 10,000 Mt of products (industrial minerals not included)

- **Low political risk and favourable mineral legislations in the Western Barents region**
- **A strong case within Europe, sustainable supply within EU**
- **Access to capital is global, cyclical market, will recover**
- **Infrastructure: we can stimulate the minerals industry, and other industries, by smart infrastructure development**



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17

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FOR A SUSTAINBLE FUTURE

**FOR THE
FUTURE OF
NEXT
GENERATIONS
IN THE ARCTIC**



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