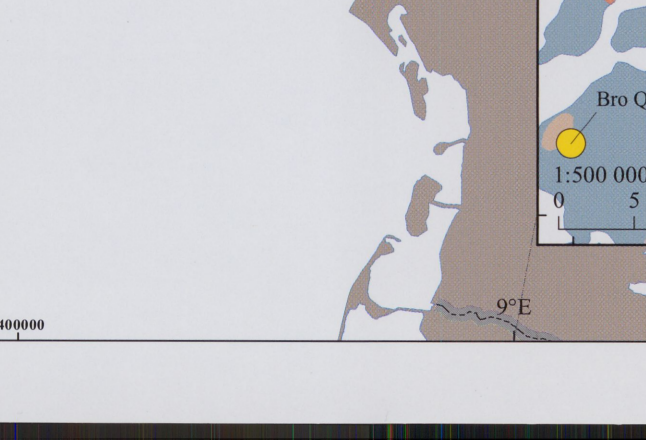
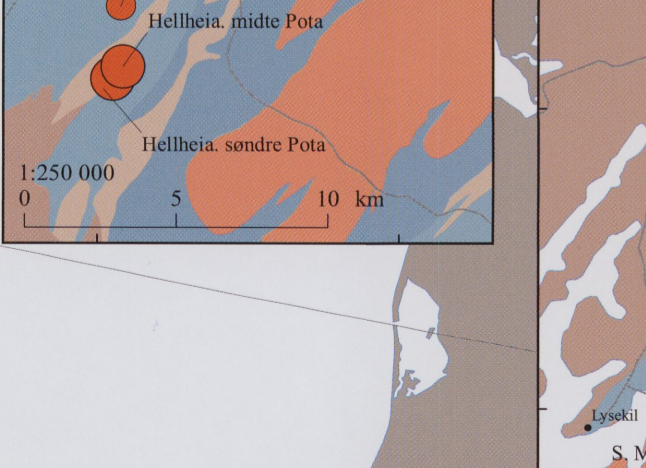
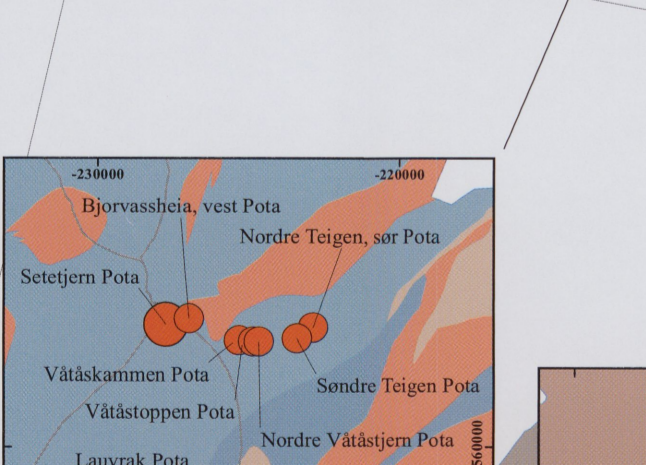
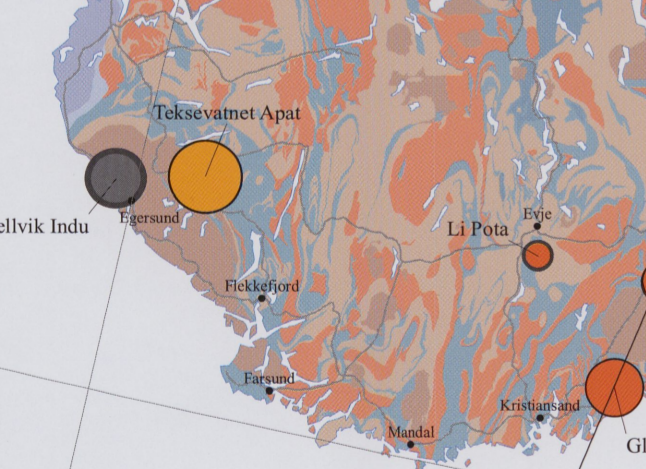
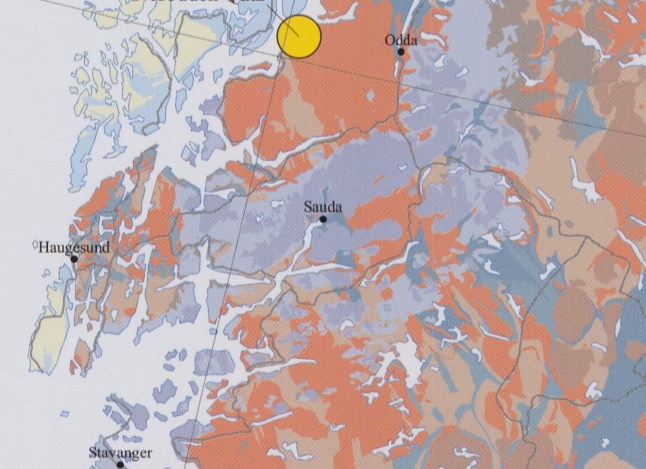
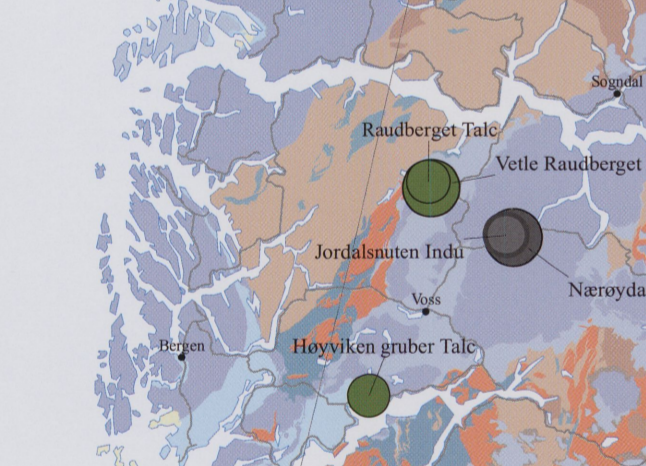
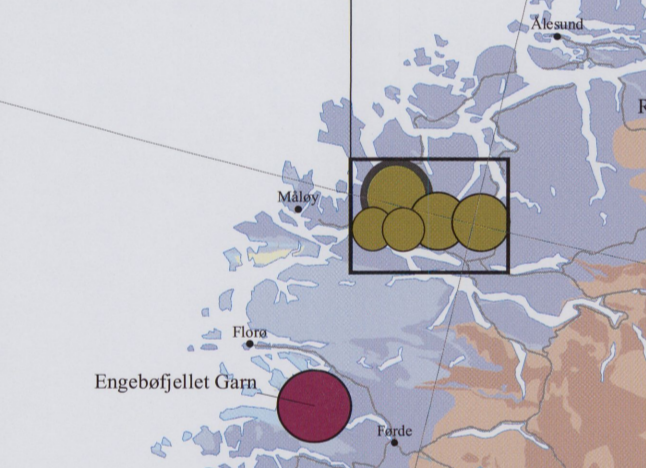
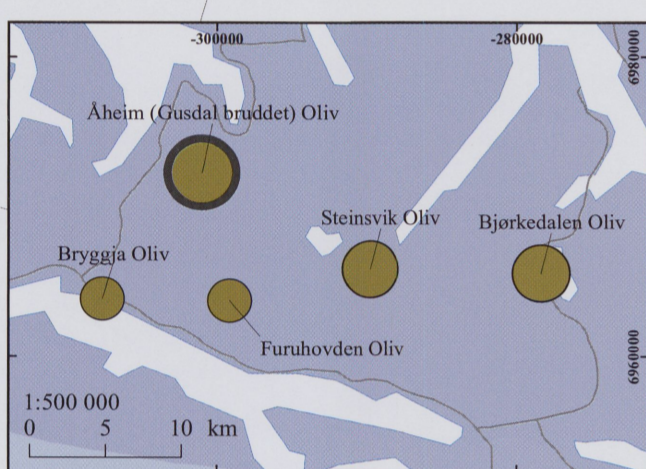
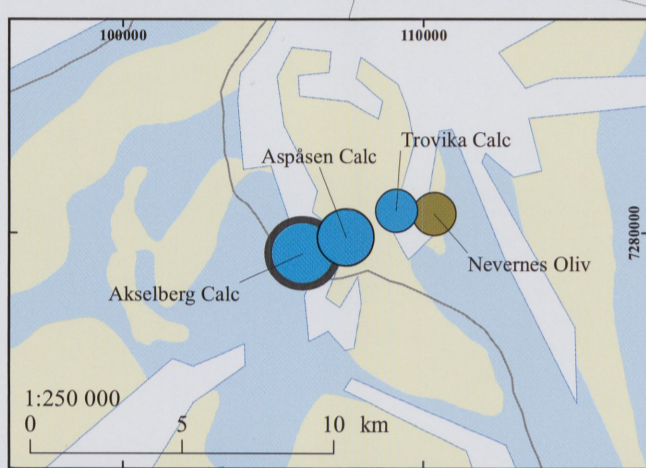
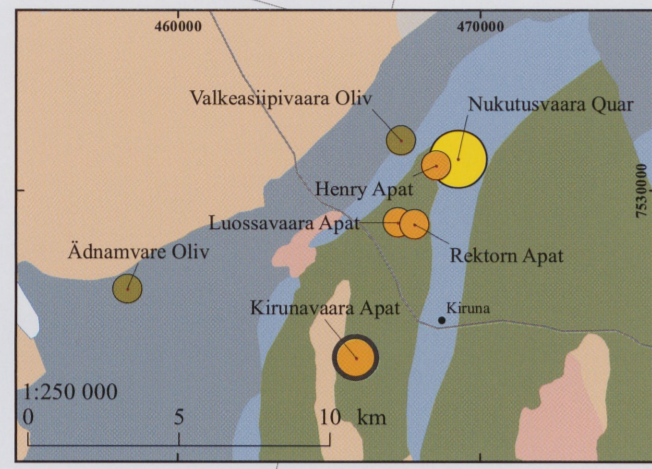
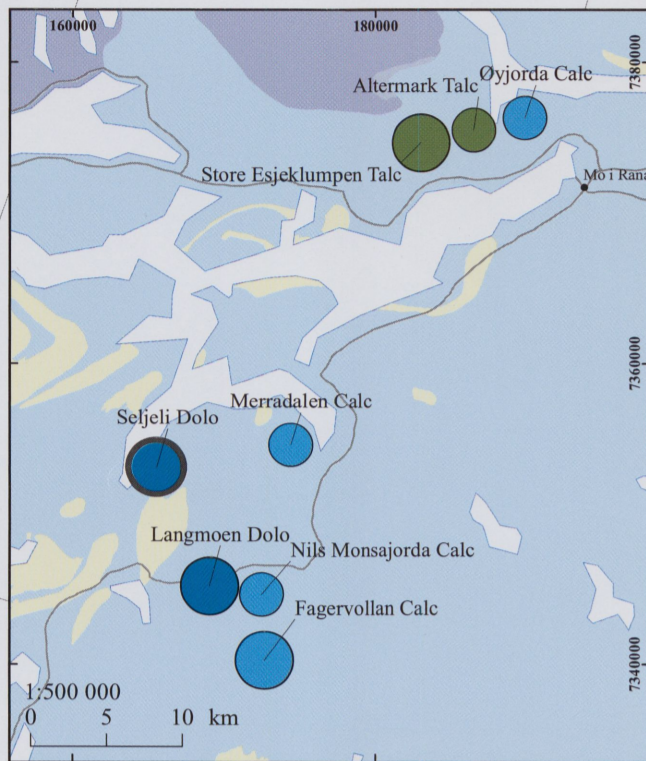


Industrial Mineral Deposit Map of the Fennoscandian Shield

1:2 000 000



Mineral deposits

Anda, Andalazite	Gema, Gemstone	Sill, Sillimanite
Anto, Antophyllite	Grap, Graphite	Spod, Spodumene
Apat, Apatite	Ilme, Ilmenite	Talc, Talc
Asbe, Asbestos	Inda, Industrial rock	Verm, Vermiculite
Badd, Baskelite	Kaol, Kaolin	Woll, Wollastonite
Bar, Barite	Kyan, Kyanite	
Bent, Bentonite	Magn, Magnetite	
Bery, Beryl	Musc, Muscovite	
Calc, Calcite	Neph, Nepheline	
Clay, Clay minerals	Oliv, Olivine	
Diam, Diamond	Pea, Peatite	
Dolo, Dolomite	Phlo, Phlogopite	
Feld, Feldspar	Pota, Potassium feldspar	
Flux, Fluorspar	Quar, Quartz	
Garn, Garnet	Shun, Shungite	

Active mine in 2012

Showing: Small, Large, Very large

Geological and topographical base map modified from:

Geological Survey of Norway, P.O. Box 615 Sluppen, 7401 Trondheim, Norway; www.ngu.no
 Geological Survey of Finland, P.O. Box 96, FI-02151 Espoo, Finland; www.gtk.fi
 Geological Survey of Sweden, P.O. Box 676, SE-75123 Uppsala, Sweden; www.sgm.se
 State Company Mineral, Detstava str. 26, 1er A office 411, 19106 St. Petersburg, Russia; www.sc-miner.ru
 Institute of Geology, Karelian Research Centre, RAS, 18510 Petrozavodsk, Republic of Karelia, Russia; www.krc.jamstec.ru
 Geological Institute of the Kola Science Centre, RAS, Apatity, Russia; www.geosci.apatity.ru

Map processing: Lindh, A.

Geological and topographical base map modified from: Kaistinen T., Stephens M.B., Bogatchev V., Nordgulen Ø., Wernstrom M. and Korhonen J. 2001. Geological Map of the Fennoscandian Shield, scale 1:2 000 000. Geological Surveys of Finland, Norway and Sweden and the North-West Department of Natural Resources of Russia.

Spatial reference: WGS 1984 UTM Zone 34N
 Projection: Transverse Mercator, False Easting: 500000.000000, False Northing: 0.000000, Central Meridian: 21.000000, Scale Factor: 0.999600, Latitude Of Origin: 0.000000, Linear Unit: Meter, GCS: WGS_1984, Datum: D, WGS_1984

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 Basemap © National Land Survey of Finland, National Land Survey of Sweden, Norwegian Mapping Authority, North-West Regional Geological Centre of Russia, data of 1998.

Mineral deposits and sites

- Impact melt, impact breccia/Impact site

Neoproterozoic (and possibly Mesoproterozoic) and Phanerozoic rocks outside the Caledonian orogenic belt

- Perno-Carboniferous igneous rocks including the Oslo rift
- Vendian to Cambrian and Devonian alkaline igneous rocks
- Upper Riphean (and possibly older) Vendian and Phanerozoic sedimentary rocks

Caledonian orogenic belt

- Lower Palaeozoic intrusive rocks in exotic and outboard terranes
- Supracrustal rocks in exotic and outboard terranes
- Neoproterozoic and Palaeozoic (Cambrian to Devonian) rocks along the shortened Balhoscandian continental margin
- Proterozoic rocks (c. 2.30-0.90 Ga) along the shortened Balhoscandian continental margin
- Archaean rocks along the shortened Balhoscandian continental margin

Neoproterozoic rocks

- Granite, pegmatite, syenitoid, anorthositic, gabbro (c. 1.00-0.92 Ga)

Mesoproterozoic to Palaeoproterozoic (1.71-1.61 Ga and possibly older) rocks

- Granitoid, syenitoid, dioritoid, dolerite and metamorphic equivalents (in part c. 1.271-1.00 Ga)
- Granite, syenitoid, dioritoid, gabbro and metamorphic equivalents (c. 1.46-1.30 Ga)
- Supracrustal rocks (younger than c. 1.50 Ga), predominantly metasedimentary
- Granitoid, syenitoid, dioritoid, gabbro and metamorphic equivalents (in part c. 1.61-1.56 Ga)
- Supracrustal rocks (in part c. 1.66-1.60 Ga)
- Granite, syenitoid, dioritoid, gabbro and metamorphic equivalents (c. 1.65-1.47 Ga)
- Granitoid, syenitoid, dioritoid, gabbro, dolerite and metamorphic equivalents, supracrustal rocks (c. 1.71-1.66 Ga and possibly older)

Fennoscandian Shield (1.96-1.75 Ga)

- Granite, pegmatite (c. 1.85-1.75 Ga)
- Granitoid, syenitoid, dioritoid and gabbro, supracrustal rocks (c. 1.86-1.84 and c. 1.82-1.76 Ga)
- Granitoid, syenitoid, dioritoid, gabbro and metamorphic equivalents, metavolcanic rocks (c. 1.96-1.86 Ga, in part as young as c. 1.84 Ga)
- Volcanic rocks (c. 1.96-1.75 Ga)
- Other supracrustal rocks (c. 1.96-1.75 Ga)

Palaeoproterozoic rocks in Lapland-White Sea granitic belt

- Granitic rock, amphibolite, anorthositic (rocks of uncertain age, in time range 2.30-1.90 Ga)

Palaeoproterozoic rocks (2.50-1.96 Ga)

- Intrusive rocks, predominantly mafic and ultramafic
- Supracrustal rocks, predominantly mafic/ultramafic metavolcanic and metasedimentary rocks

Archaean rocks

- Intrusive rocks (c. 3.20-2.50 Ga and possibly older), orthogneiss, migmatitic gneiss
- Supracrustal rocks (c. 3.20-2.75 Ga and possibly older)