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Mining Authority Tukes' review of the mining industry and bottlenecks in the mineral strategy

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Summary, Statistical Review of Mining in Finland in 2024

EXPLORATION

2024 saw 60 companies submit exploration reports to Tukes.

- Companies invested 90,5 millions euro in ore exploration in Finland (down 4% from the previous year)
- Ore exploration drilling was carried out 255 km (down 11% from the previous)
- Compensation paid to landowners for exploration was approximately EUR 8,1 million

MINING ACTIVITY

22 companies report mining from 44 mines

- The companies invested EUR 449 million, which is 18% more than in the previous year. The most significant investments were made in the Kevitsa, Terrafame, Keliber, Kittilä, Siilinjärvi and Kemi mines.
- Metal ore, carbonate rock, industrial rock and industrial mineral mining was 44,3 million tons (down 5% from the previous year).
- The total extraction of the mines was 120,8 million tons (down 6% from the previous year). The three largest Terrafame (44,2 million tons), Kevitsa (32,2 million tons), and Siilinjärvi (28,42 million tons) mined 87% of this.

Major phases of exploration and mining permits in Finland



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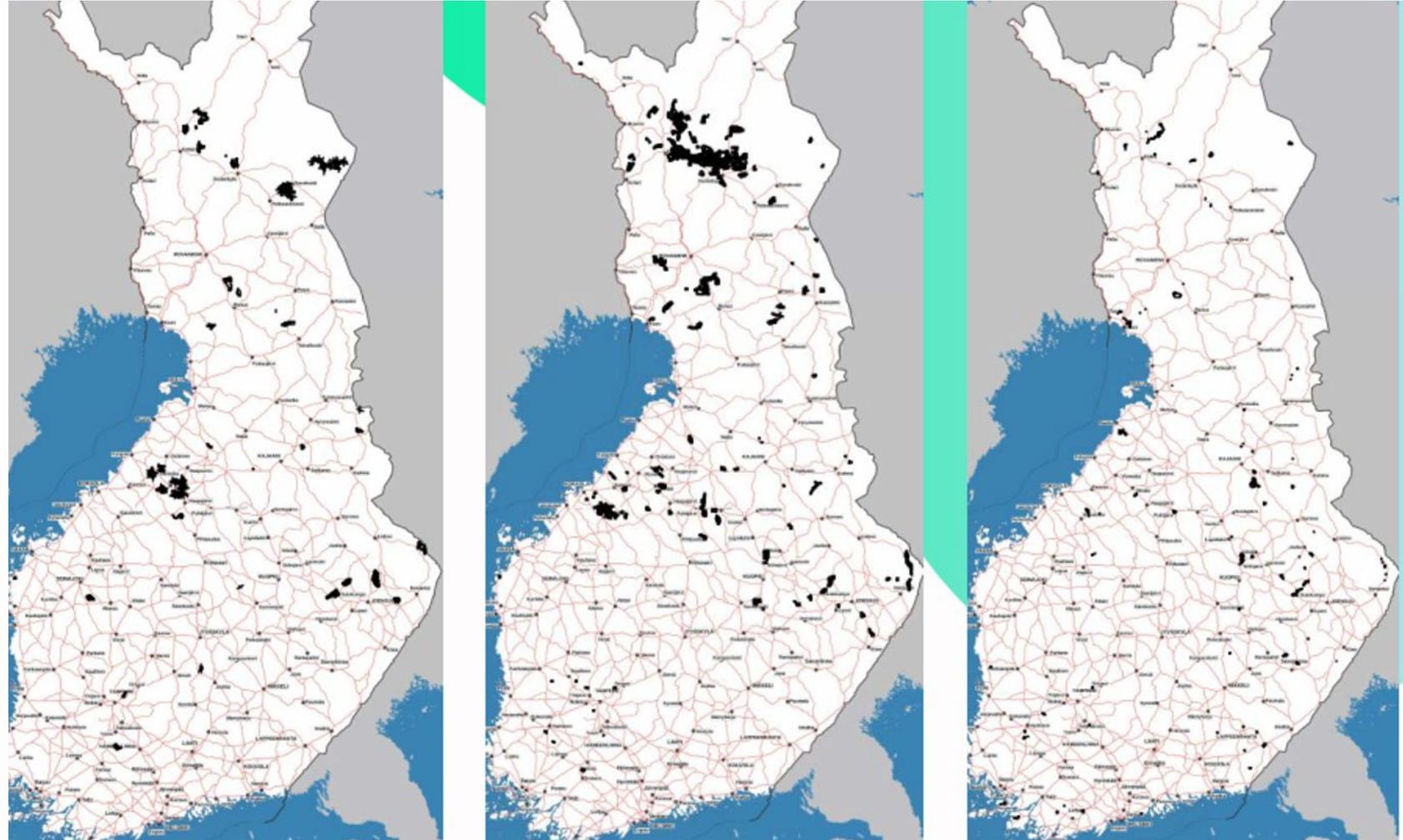
**Total area of
reservations
1199 km²**

**exploration
3076 km²**

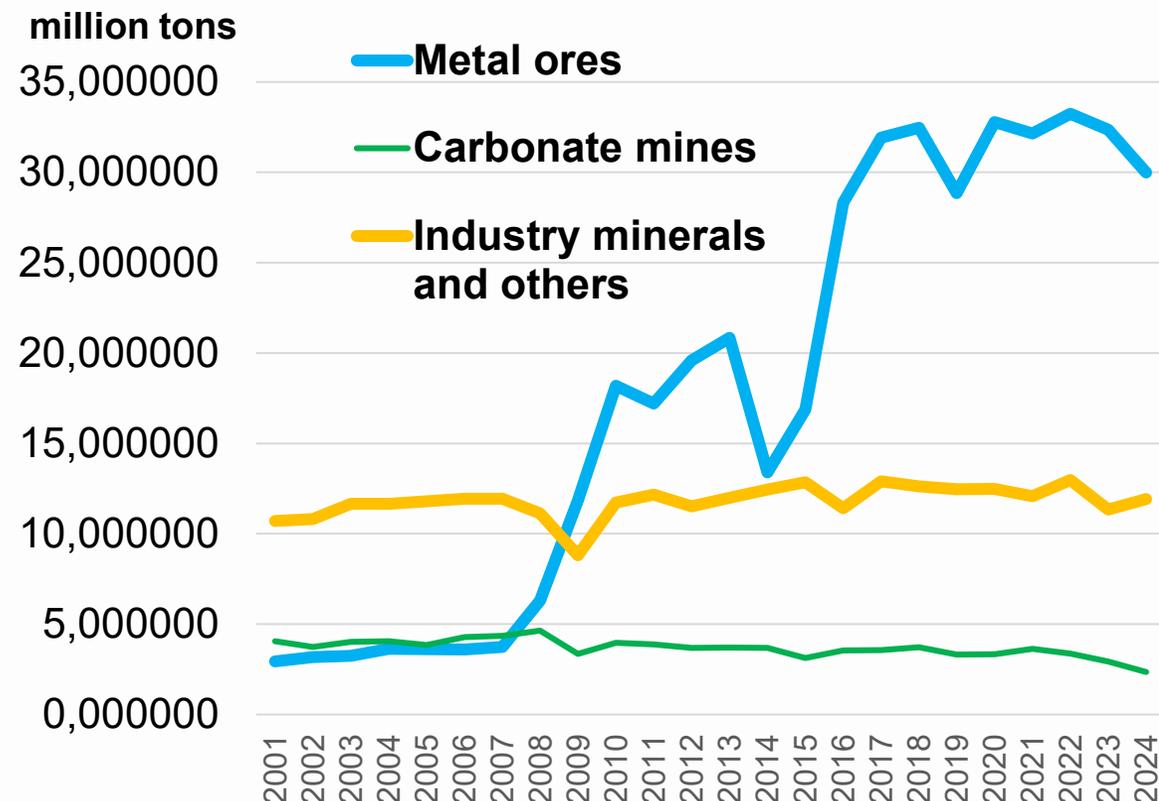
**mining
310 km²**

Average size of

- reservation notification is 24 km²
- exploration permit is 7.2 km²
- mining concession is 3.6 km²



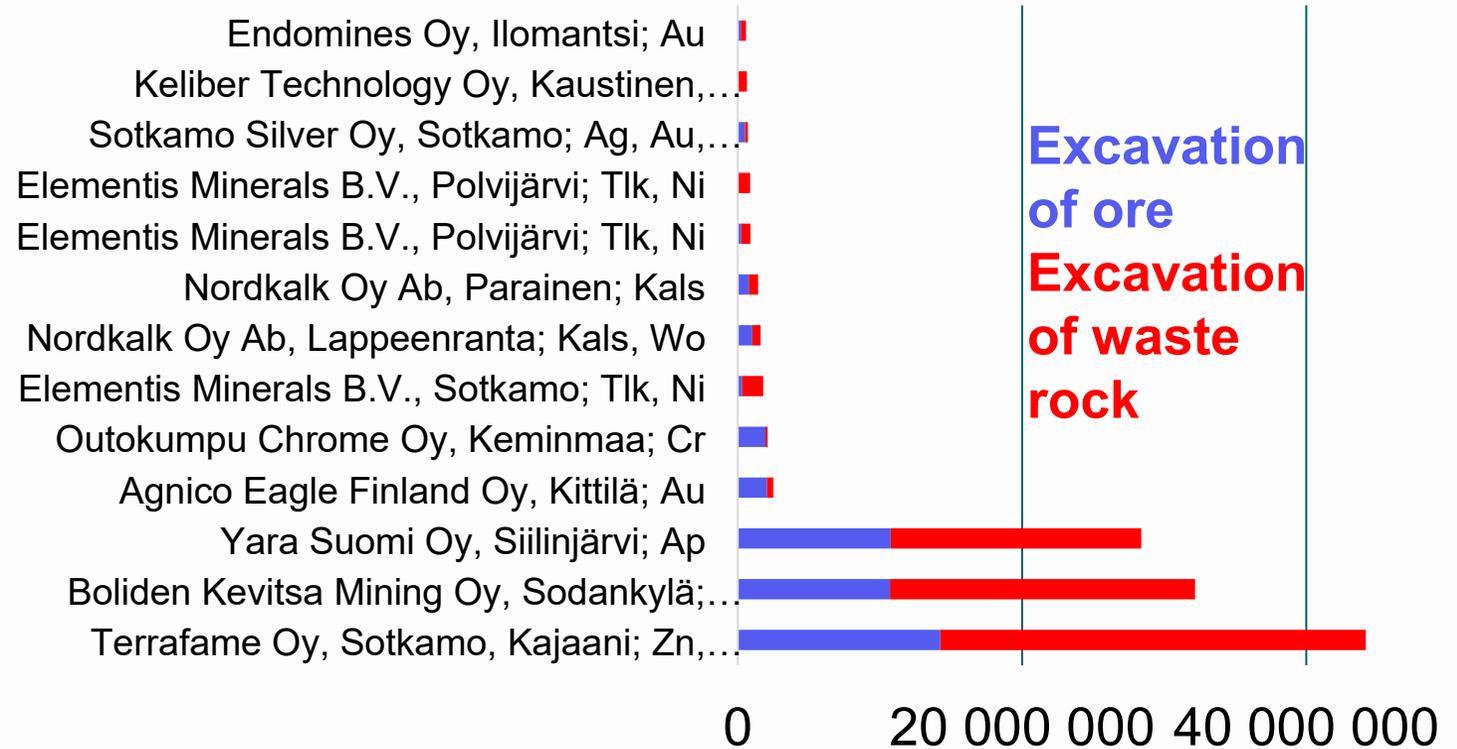
Excavation (tons) for ore in 2001–2024



- No significant mines have been opened since 2011.
- The current level of metal ore mining would have been reached in 2013 without the gypsum spill at the Talvivaara mine.
- Total mining of carbonate mines has halved from the 2008 level.
- There is no ongoing mine construction boom in Finland. Of course, there are mining projects on paper and in media!!

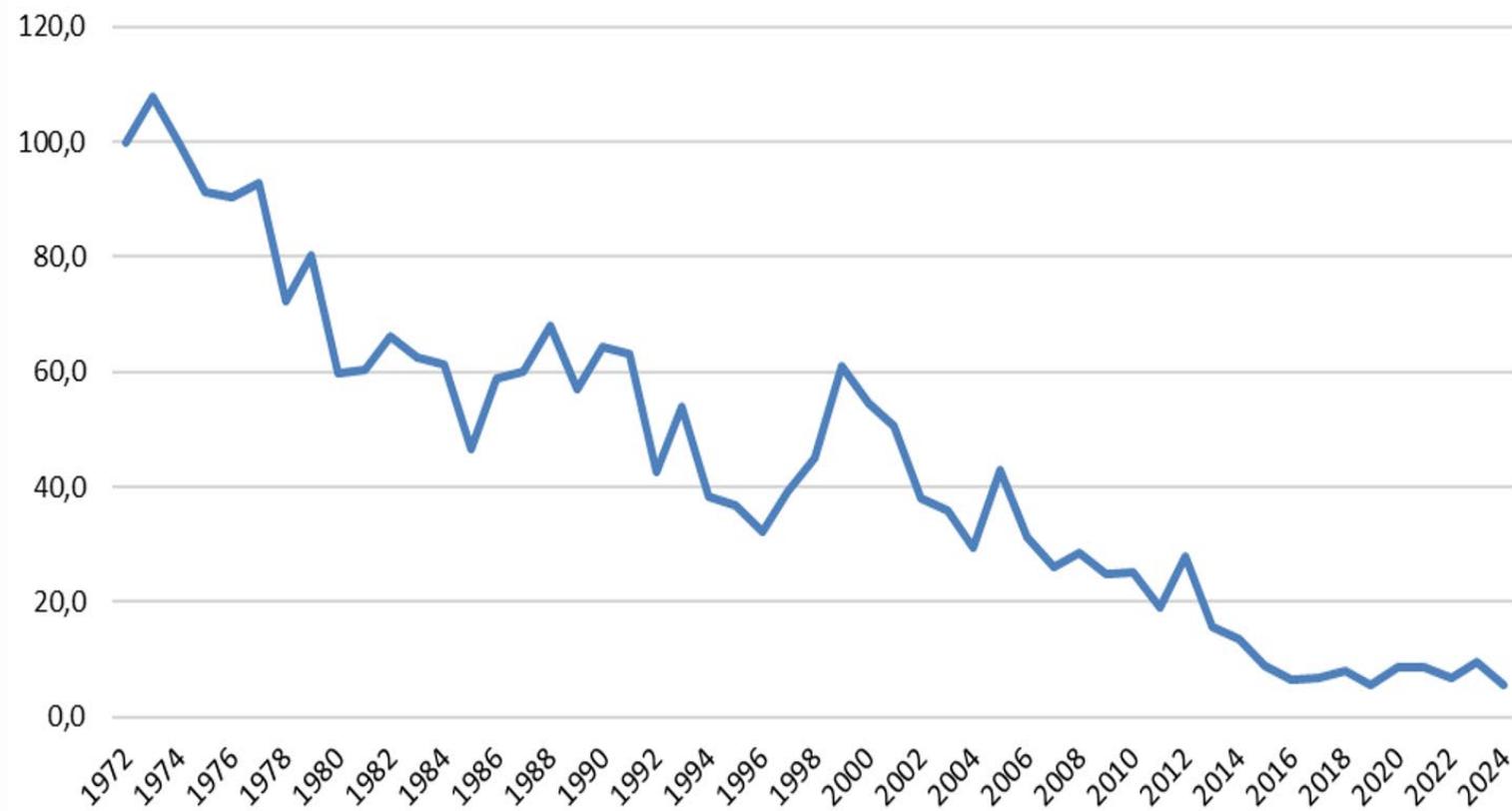
Excavation (tons) in biggest mines in Finland 2024

- These 13 biggest mines accounted for 98% of the total extraction of all mines.
- The three largest mines are open pit mines.
- Biggest are open pit mines.



Mining accidents leading to more than one day's absence per million work hours, 1972–2024

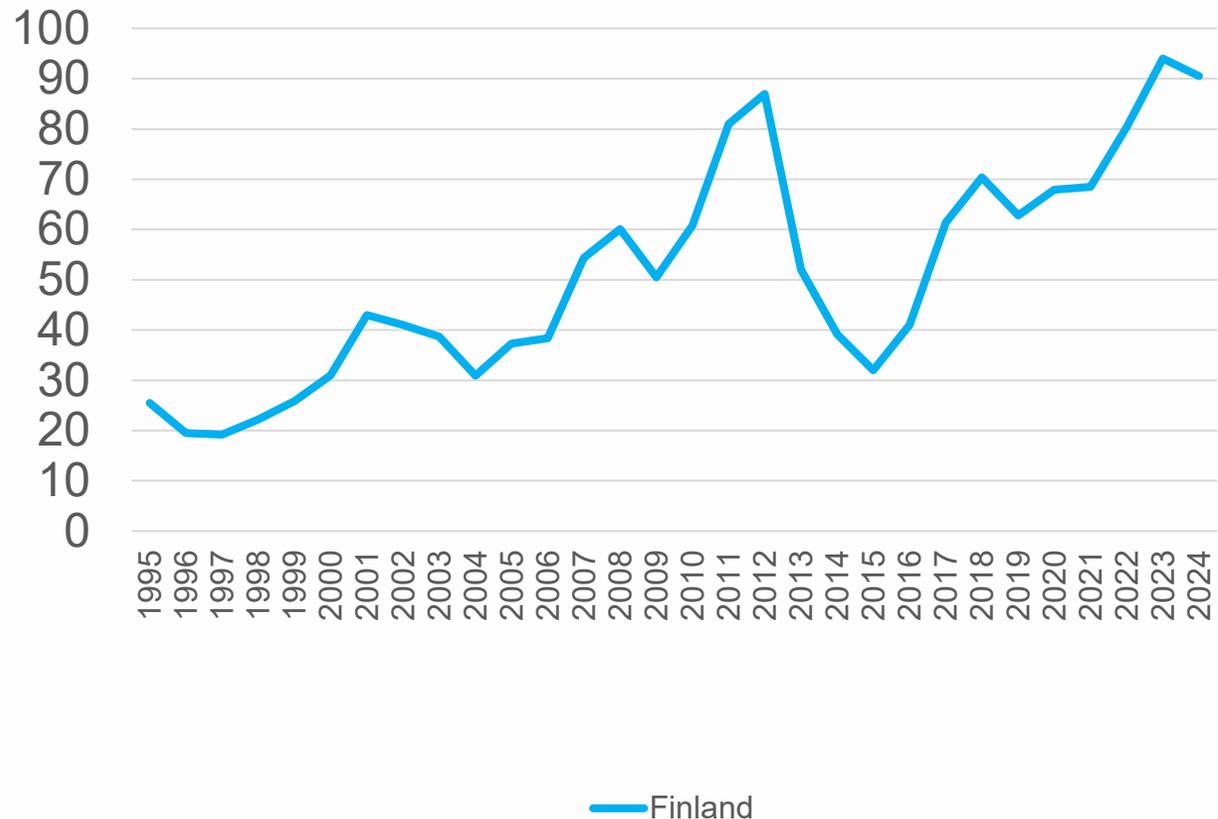
- Despite the significant increase in metal ore mining since 2008 to 2017, operators have made significant improvements in mining safety.



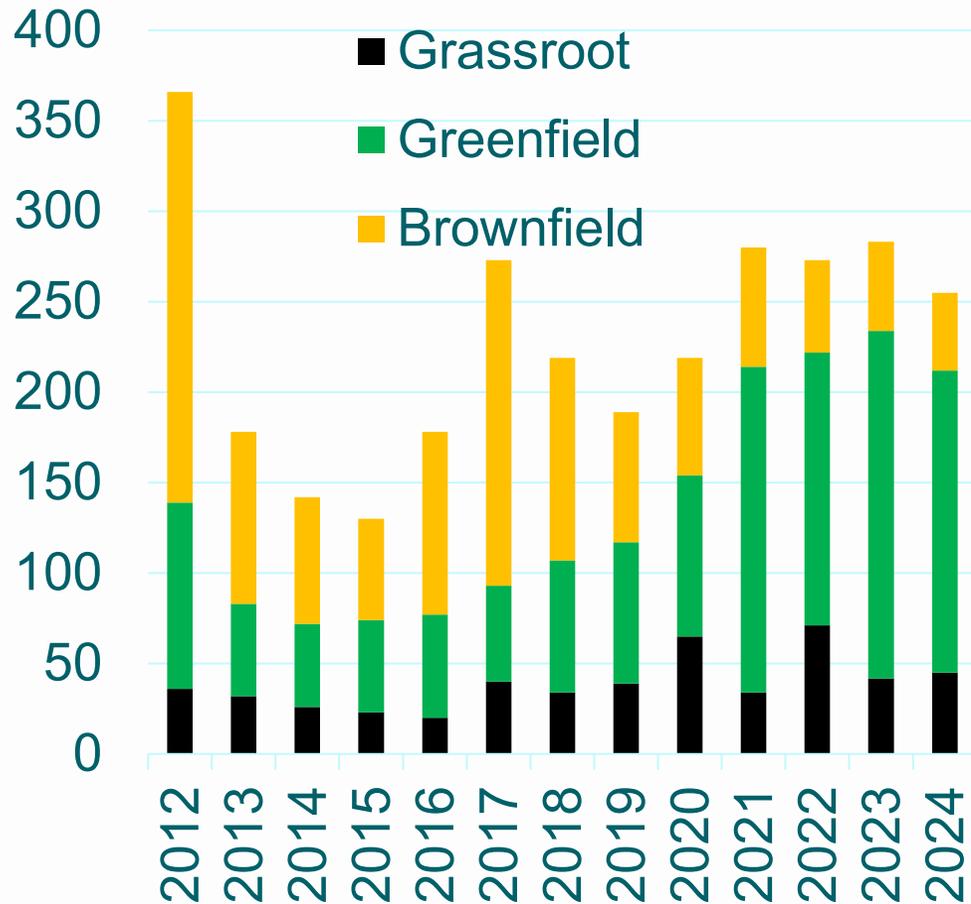
Investments in ore prospecting 1995–2024

- **Peak in 2012**, mineral exploration investments in Finland were 87 Meuro
- **In 2024**, investments were 90.5 Meuro. Of this, 8.1 Meuro went to landowner compensation and 4.7 Meuro to nature surveys, investments in geological research activities were 77.7 million,
- Taking into account 29% inflation, investments were 55.2 Meuro in “2012 euros”. **In 2024, investments in geological research were 37% lower than in 2012.**
- **Mineral exploration investments are stagnating.**

million euros



Drilling km 2012-2024



Grassroot

- The most important, most expensive, highest-risk stage in mineral exploration.
- Creates the foundation for the future of the entire mining cluster.
- If managed well, the attractiveness of the country for foreign mineral exploration companies will increase.
- The first indications of mineralization are found.
- GTK and Outokumpu did this before.

Greenfield

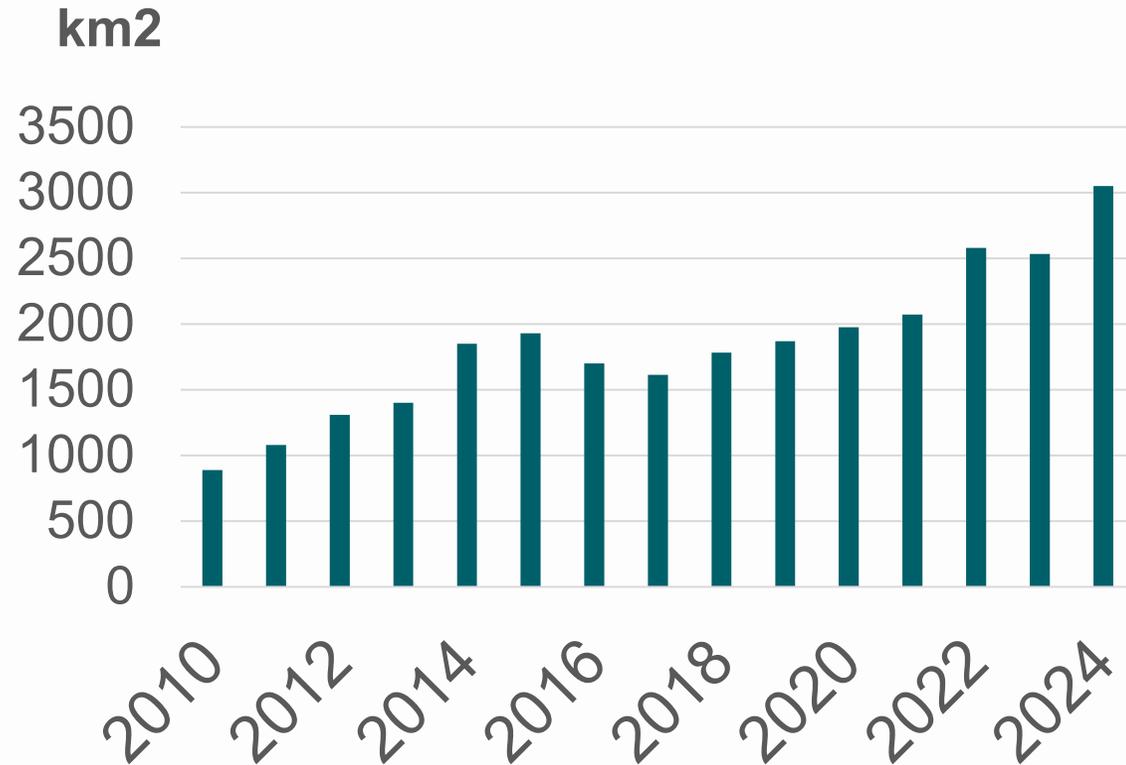
- Determining the size and quality of mineralization.

Brownfield

- Drilling the size of known mineralization, preparing for mining operations.
- During the Chinese boom, Kevitsa, Kittilä and Talvivaara were quickly started up, when metal prices were at an all-time high.

- **The total number of drilling kilometers is stagnant!**
- **Grassroot drilling is too low.**
- **CRMA targets in Europe are slipping away!**

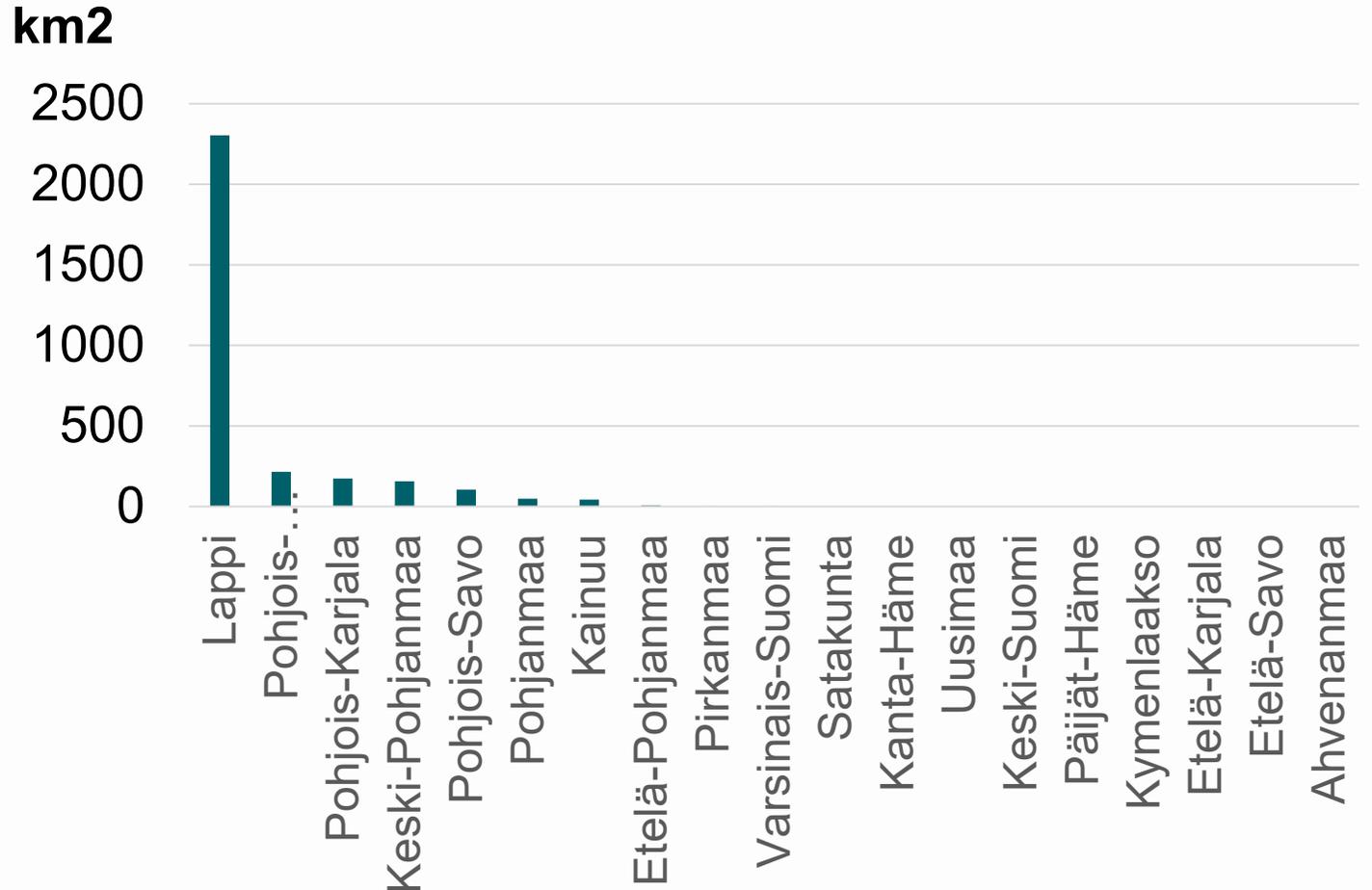
Development of the area eligible for mineral exploration



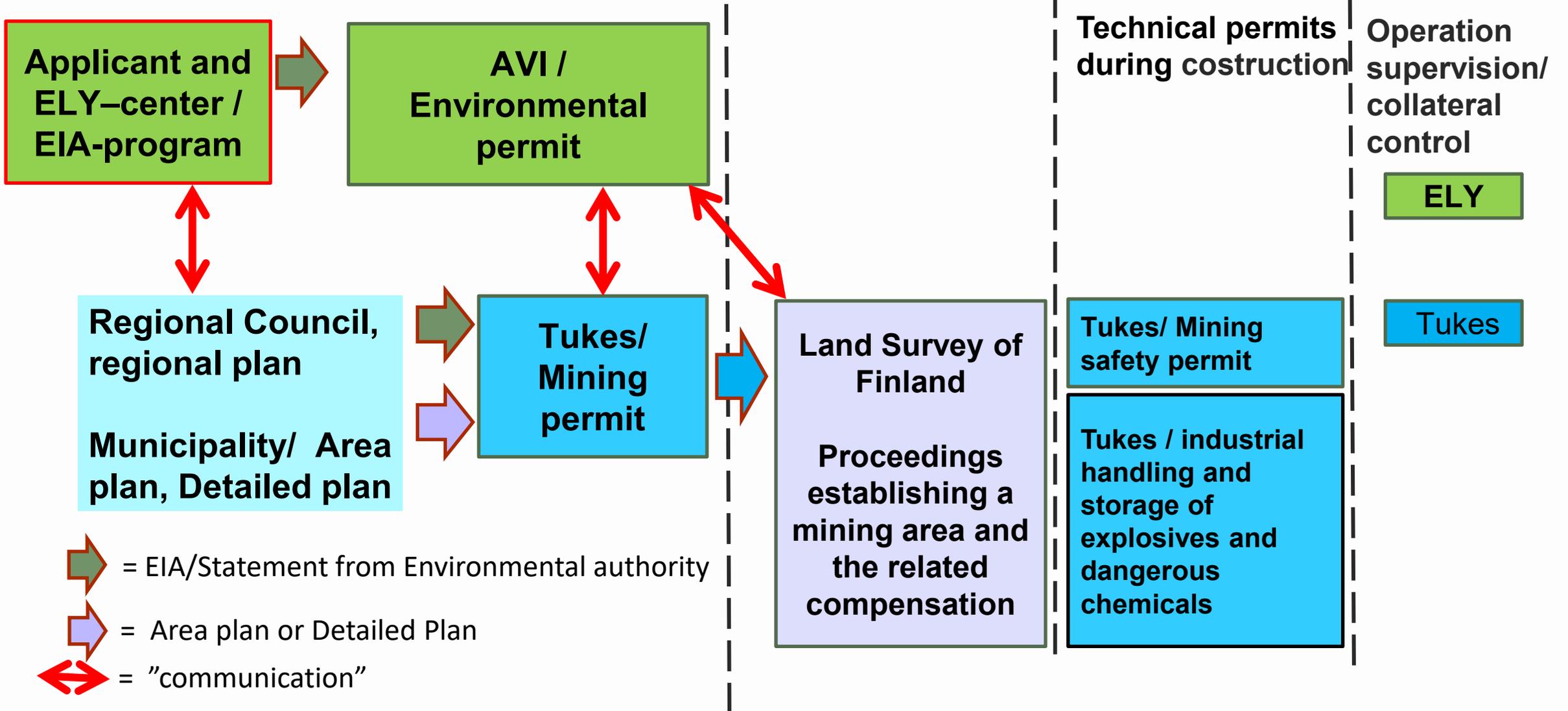
- The area of land eligible for exploration in the Tukes mining register has tripled from 2010 to 2024
- Exploration companies are keen to retain possession of exploration areas; the amount of landowner compensation paid to landowners increased to 8.1 Meuro in 2024.
- Access to risk financing for exploration (e.g. drilling) is stagnating.

Area of valid claims/exploration areas by province (km²), 31.12.2024

- Based on area, 75% of mineral exploration in Finland takes place in Lapland.
- Considering the mineral potential of the bedrock, mineral exploration in Finland is low “due to general reasons”.
 - general international criticism of the mining industry.
 - the amount of information about the bedrock does not attract investment.



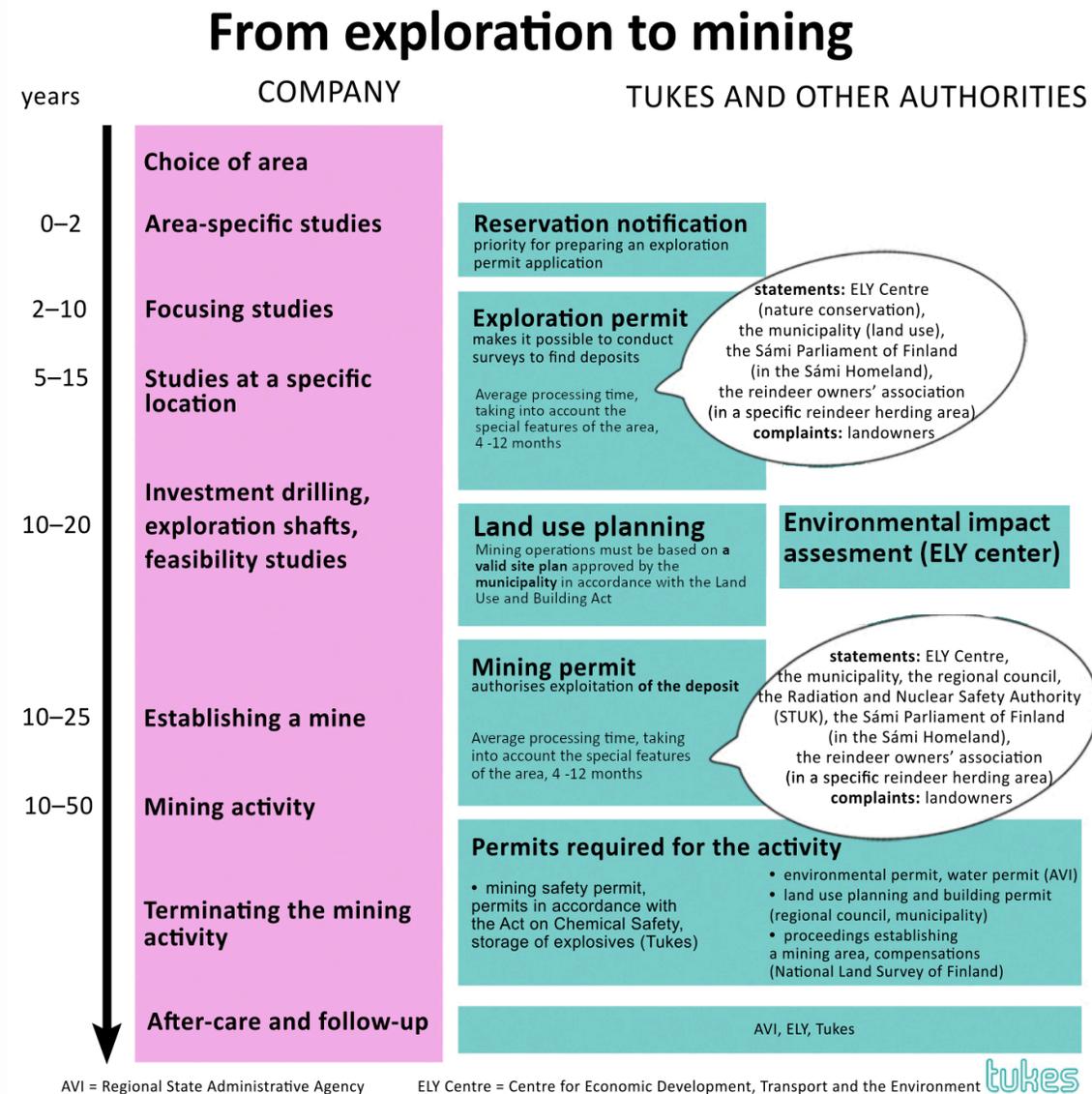
Mining permit, environmental permit, zoning (simplified permit process for exploitation of minerals)



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Case Sakatti

- Exploration in Sakatti started in 2004
- Discovery of Ni/Cu mineralization published in 2011, exploration continued until 2024
- EIA report completed in 2022, Lapland ELY issued a reasoned conclusion in 2023
- Sodankylä municipality/Zoning/General plan, Natura issue (2025?)
- Environmental permit (2025?)
- Mining permit (2025?)
- Complaints to courts (Supreme Administrative Court)
- Mining (??)



Bottlenecks in the implementation of the mineral strategy

- **Exploration investments are small in relation to Finland's mineral potential.**
- Grassroot projects in Central/Southern Finland end with the transfer of the permit applicant already during the permit application processing period due to criticism of the exploration activities.
- The exploration permit process can be delayed by appeals to the courts.
- The mining permit system is complex and unpredictable in duration.
- Mineral policy lacks a clear state of will from the state.

More information about mining and exploration in Finland

Turvallisuus- ja kemikaalivirasto (Tukes) /Finnish Safety and Chemicals Agency (Tukes)

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MINING AND EXPLORATION on Tukes www-pages

- <https://tukes.fi/en/industry/mining-ore-prospecting-and-gold-panning>

Mineral Deposits, Exploration and Mining Registry

- <http://gtkdata.gtk.fi/mdae/index.html> (Select Layers, Exploration layers, Mining Registry)

