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## **GTK-Tukes seminar 19.5.2026**

# **Review of mining authority Tukes on exploration and mining industry**

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## Axel Oxenstierna organized the administration. He established the mining authority in 1637



Axel Oxenstierna var Gustav II Adolfs man under flera år. Han var också den som i praktiken låg bakom att ett Generalbergsamt bildades.

- Sweden and Finland share a common history in the establishment of major state administrative authorities.
- The history of mining supervision began on February 14, 1637, when the regency government of Queen Christina decided to establish the “Generalbergsamt.” King Gustav II Adolf had fallen at the Battle of Lützen in 1632.
- The Mining Master became a state official.
- Axel Oxenstierna was the architect of the state administration: the Provincial Governments (1634) and the National Land Survey (1628)

- The mining industry was an important industry for states in the 17th century, because according to the doctrine of mercantilism, state wealth consisted of metals, especially precious metals.

## Ohjeet kaivosviranomaiselle 14.2.1637

- Täytyy olla ahkera ja tarkka kruunun vuorityön valvoja
- Kenelläkään viranomaisessa työskentelevällä ei saa olla osuutta kaivoksessa vaan täytyy tyytyä saatuun palkkaan.
- Yksityisiä matkoja ei saa yhdistää kaivostarkastusmatkoihin.
- Tulee pitää rekisteriä luvista, sijainnista, tuotoista ja onnettomuuksista.
- Kaivoksen lopetus täytyy valvoa.
- Pitää tehdä kaivostoiminnasta vuosiraportti kuninkaalle.
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- **Instructions for the Mining Authority, 14 February 1637**
- The Crown mining inspector must be diligent and precise.
- No one working within the authority may hold a share in any mine, but must be satisfied with the salary received.
- Private journeys must not be combined with mine inspection trips.
- A register must be kept of permits, locations, production, and accidents.
- The closure of a mine must be supervised.
- An annual report on mining activities must be submitted to the King

## Summary, Statistical Review of Mining in Finland in 2025

### EXPLORATION

2025 saw 63 companies submit exploration reports to Tukes.

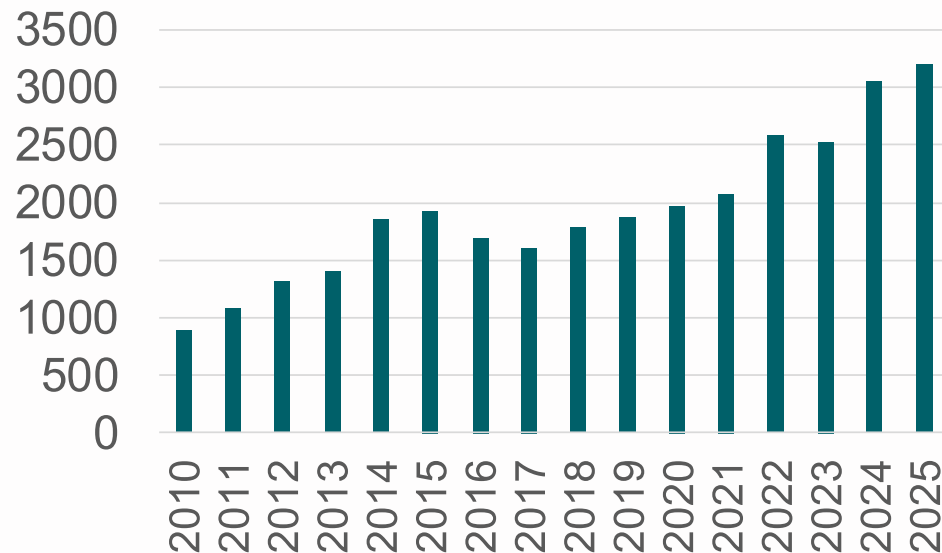
- Companies invested 89,1 millions euro in ore exploration in Finland.
- The 12 largest companies accounted for approx. 80% of exploration costs.
- Exploration drilling totaled 276 km (+8% from previous year).
- Landowners were paid approx. EUR 9.3 million in compensation for 3,201 km<sup>2</sup> of exploration areas.
- Companies invested EUR 4.1 million in environmental studies and nature impact assessments.

### MINING ACTIVITY

22 companies reported mining from 41 mines

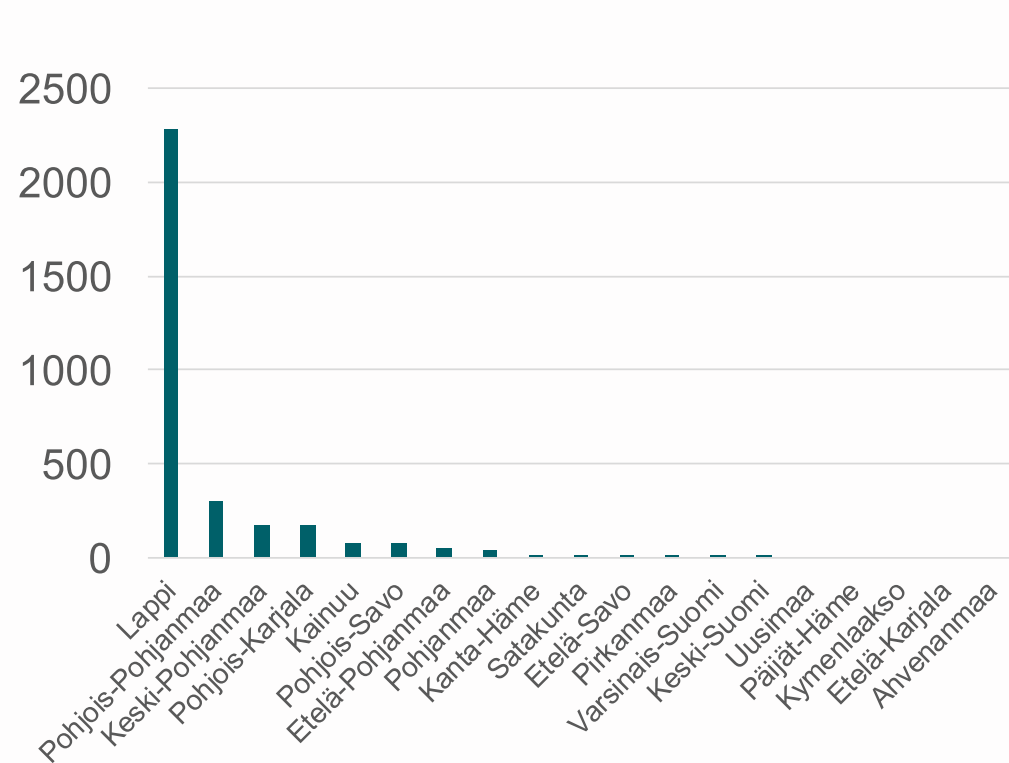
- The companies invested EUR 439 million, which is 2 % less than in the previous year. The most significant investments were made by Keliber.
- Metal ore, carbonate rock, industrial rock and industrial mineral mining was 43,8 million tons (down 1% from the previous year).
- Total mining: 118.2 Mt (down 2%).
  - Top three: Terrafame (42.3 Mt), Kevitsa (30.7 Mt), Siilinjärvi (29.2 Mt) → 86% (all open pits).

## Valid Exploration Permits as of 31 Dec 2025 (km<sup>2</sup>)



- Area development:
  - 2010: 890 km<sup>2</sup>
  - 2025: 3,201 km<sup>2</sup>
  - Increase by 3.6× (2010–2025)
- Despite growth in permitted area, actual geological research investments have not increased.
- Companies want to retain mining rights under the Mining Act despite rising landowner compensation.

## Exploration Permits by Region (km<sup>2</sup>), 31 Dec 2025



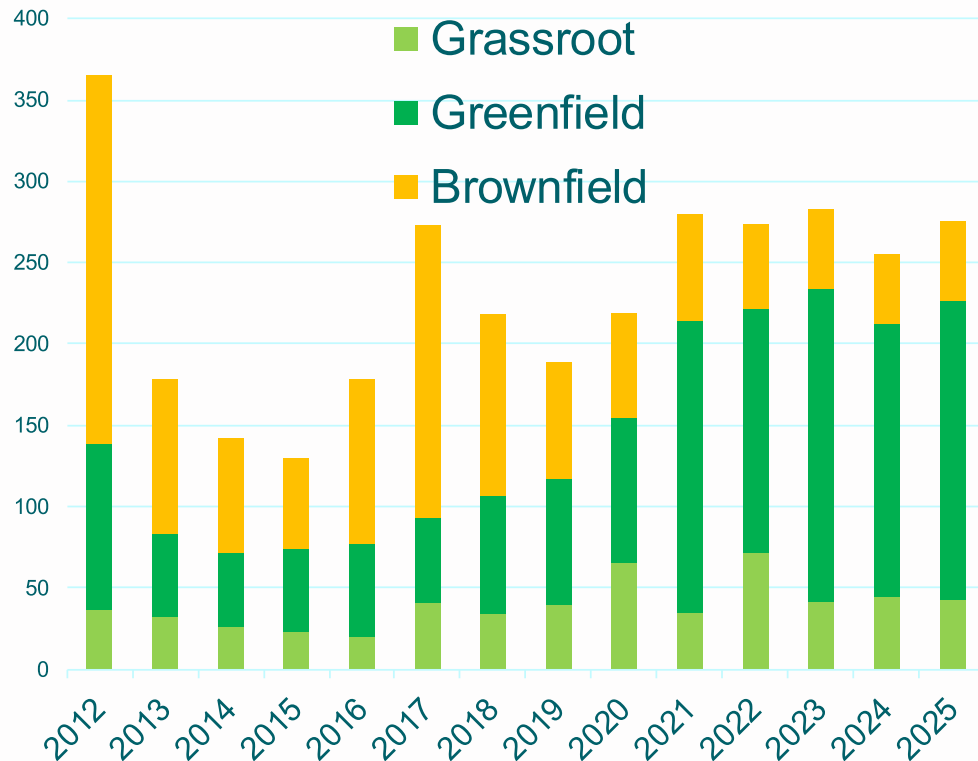
- Lappi: exploration focused on Central Lapland greenstone belt and Peräpohja (Kittilä and Kevitsa deposits).
  - Sakatti Ni-Cu and Ikkari gold deposits in permitting process.
- Pohjois-Pohjanmaa: exploration for nickel, copper, PGE, gold, and silver.
- Keski-Pohjanmaa: lithium exploration near Keliber deposits.
- Pohjois-Karjala: exploration focused on Endomines gold.

# Exploration Investments,, 1995–2025: Finland vs Global, EUR million, dollar million



- According to S&P Global (World Exploration Trends 2026):
  - Global non-ferrous exploration budgets fell ~0.6% in 2025 to USD 12.4 billion.
  - Junior and mid-tier companies face financing challenges.
  - Gold exploration funding increased 11%, copper slightly increased.
  - Grassroots exploration at historically low levels.
- In Finland:
  - Exploration investments decreased 2%.
  - Focus also on gold exploration.
  - Grassroots investments remain low.

## Exploration Drilling (km), 2012–2025

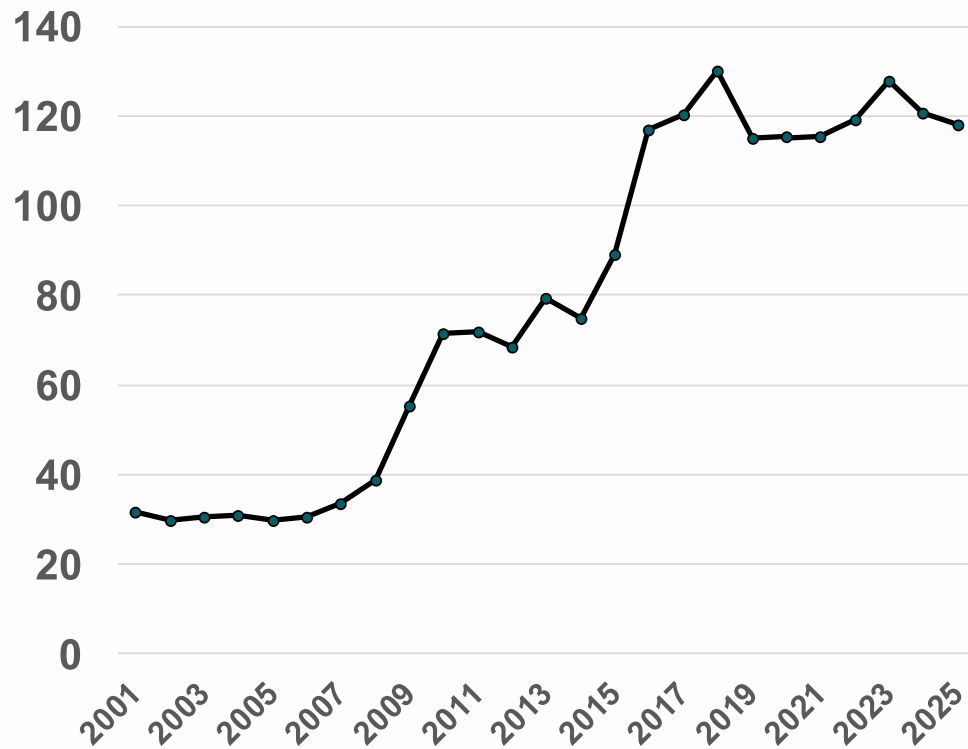


- Drilling is the most critical exploration phase, providing definitive geological data.
- Drilling levels remain low relative to Finland’s geological potential.
- Definitions:
  - **Grassroots**: very limited prior geological knowledge; high risk but enables future investments.
  - **Greenfield**: area already studied with known mineral potential.
  - **Brownfield**: drilling near known deposits or existing mines.

# Exploration Statistics 2021–2025

Key 2025 figures:	<b>2025</b>	2024	2023	2022	2021
Exploration expenditure, EUR:	<b>89,1</b>	90,5	94,0	80,4	68,5
Reporting companies:	<b>63</b>	60	59	54	50
Reservation notifications:	<b>66</b>	60	92	83	75
Exploration permit applications:	<b>128</b>	157	172	143	219
Reservation area, km <sup>2</sup> :	<b>2 595</b>	11 771	27 256	24 736	30 000
Pending permit areas, km <sup>2</sup> :	<b>3 860</b>	5 125	6 850	6 476	5 873
Valid permit areas, km <sup>2</sup> :	<b>3 201</b>	3 050	2 534	2 581	2 072
Drilling, total, km:	<b>276</b>	255	284	274	280
Grassroots:	• <b>43</b>	• 45	• 42	• 71	• 34
Greenfield:	• <b>184</b>	• 167	• 193	• 151	• 180
Brownfield:	• <b>49</b>	• 43	• 49	• 51	• 66

## Total Mining Volume (Mt), 2001–2025

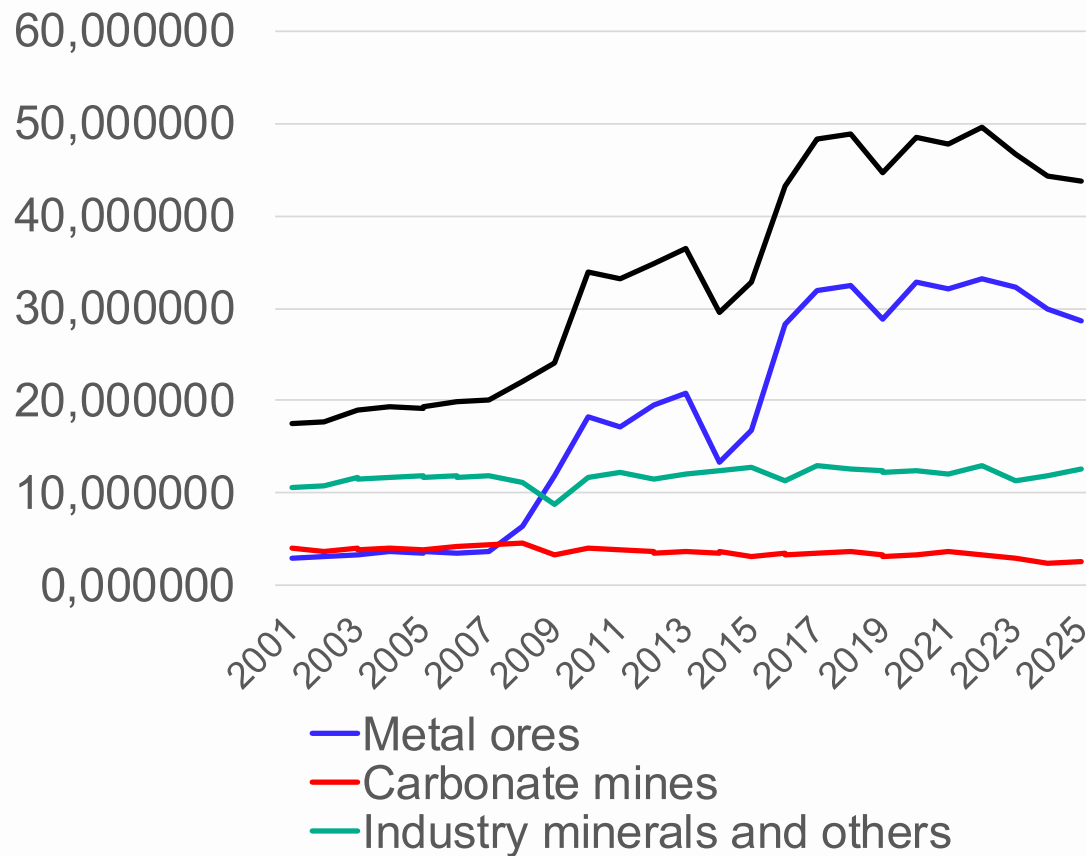


- Total mining in 2025: 118.2 Mt.
- No major change since 2016.
- No significant new mines since 2011, except Keliber (started 2025).

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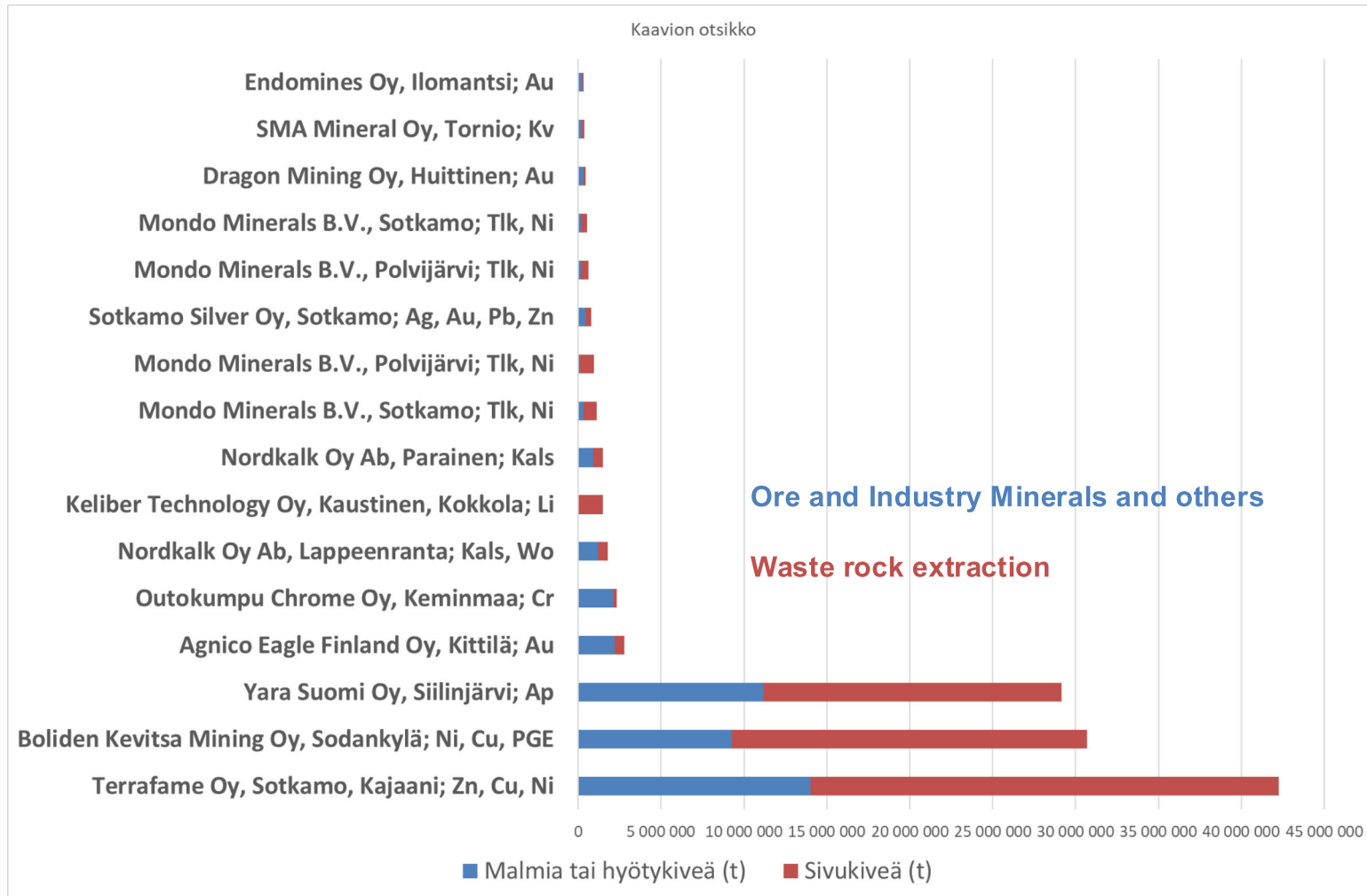
## Ore and Industrial Mineral Extraction (Mt), 2001–2025



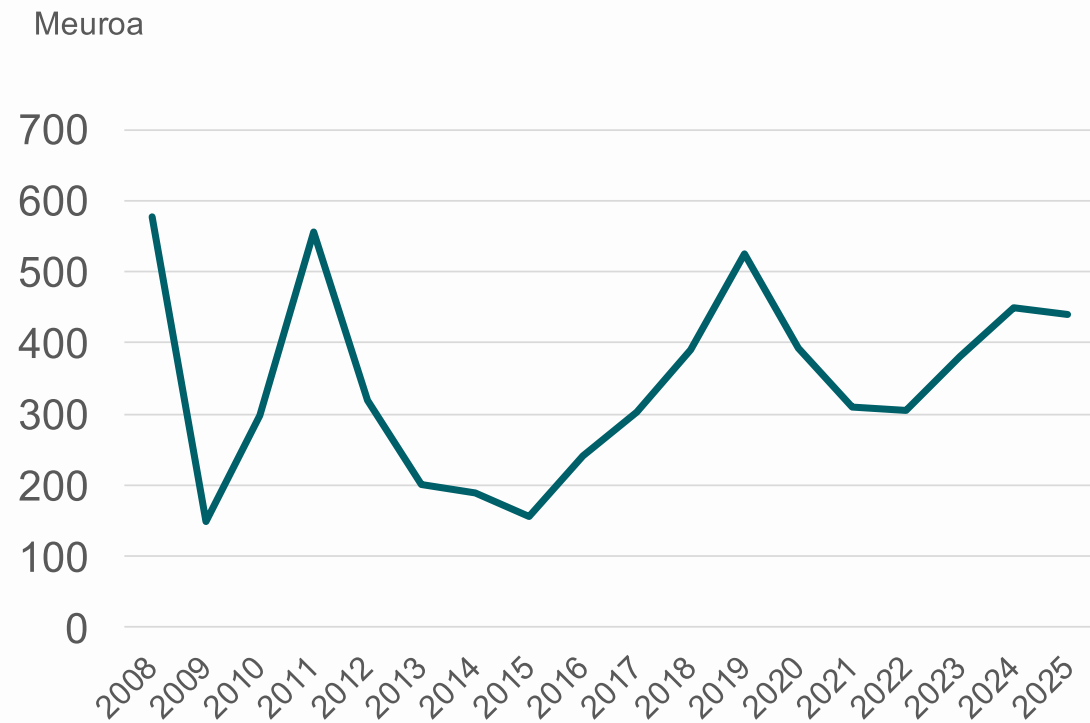
- 2025 total: 43.8 Mt (stable since 2016).
- Metal ores: 28.7 Mt (peak in 2022: 33.2 Mt).
- Carbonate rock:
  - 2008: 4.6 Mt
  - 2025: 2.6 Mt

# Production of Largest Mines (>0.3 Mt/year)

The 16 largest mines account for ~99.7% of Finland's total mining output.



# Mining Investment Development 2008–2025



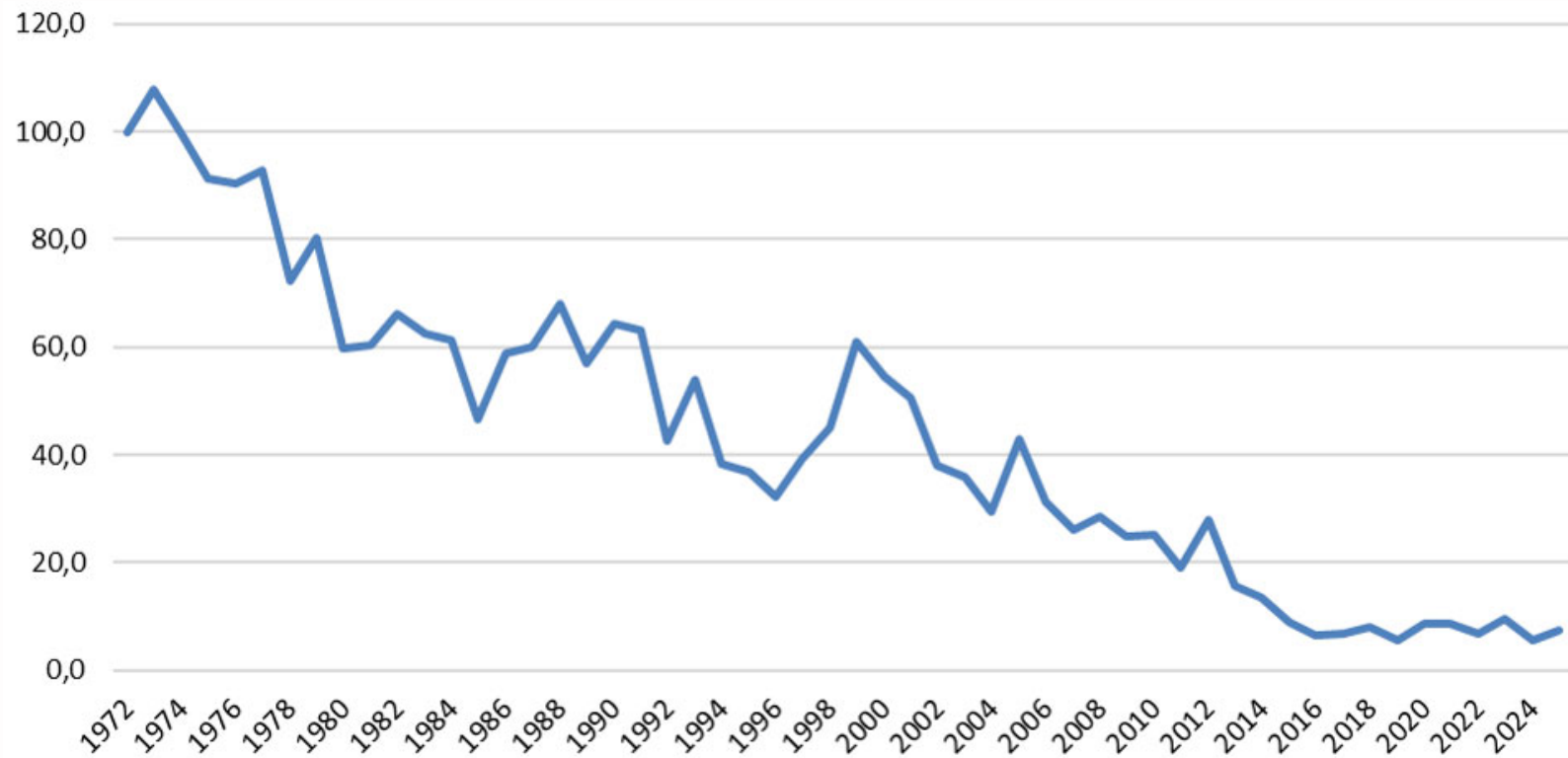
- 2025 investments: EUR 439M
  - Inflation-adjusted (2008): EUR 325M
- 2008–2011: investments in opening Kittilä, Talvivaara, Kevitsa.
- Current production level reached in 2016.
- 2018–2025: investments mainly for sustaining production.
- Largest recent investment: Keliber concentrator (starts 2026).

## Mining Statistics 2020–2025

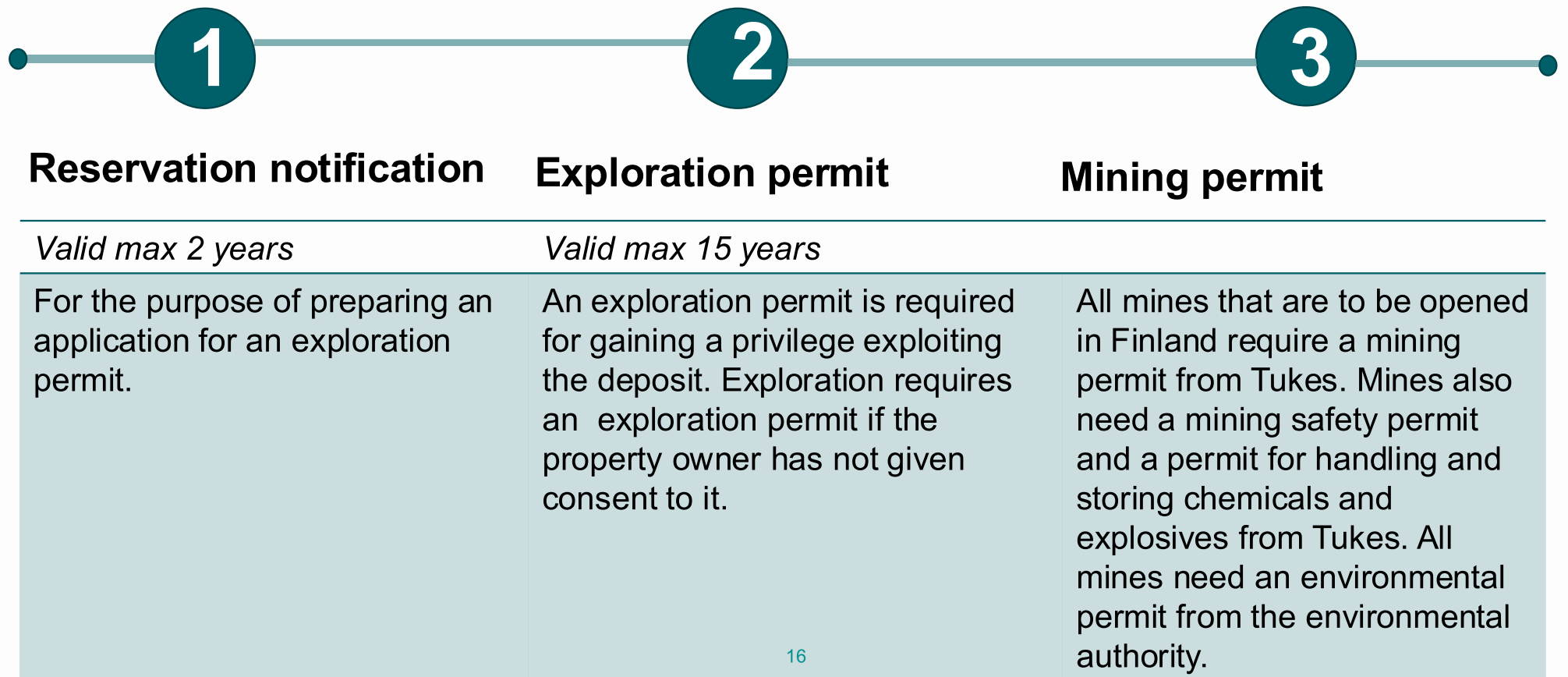
	2025	2024	2023	2022	2021
Active mines:	41	44	39	43	44
Investments, EUR million:	439	449	380	304	311
Ore extraction, million tons:	43,8	44,3	46,8	49,6	47,9
Total mining, million tons:	118,2	120,8	128,1	119,4	115,5

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**Mining Accidents (causing >1 day absence) per million working hours, 1972–2025**  
**Long-term trend clearly decreasing.**



# Major phases of exploration and mining permits in Finland



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## More information about mining and exploration in Finland

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

- Mailing address: PL 66, 00521 HELSINKI
- Visiting address: Pilke, Ounasjoentie 6, ROVANIEMI

### Contact to mining authority by email

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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)

