



**UNDERCOVER**

Redefining deep-earth exploration

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sustainable innovation

# A Comparative Analysis of Social Perceptions of Mineral Exploration in Finnish, Namibian, and Portuguese Case Studies: Findings from the UNDERCOVER Project

World Resources Forum, Geneva

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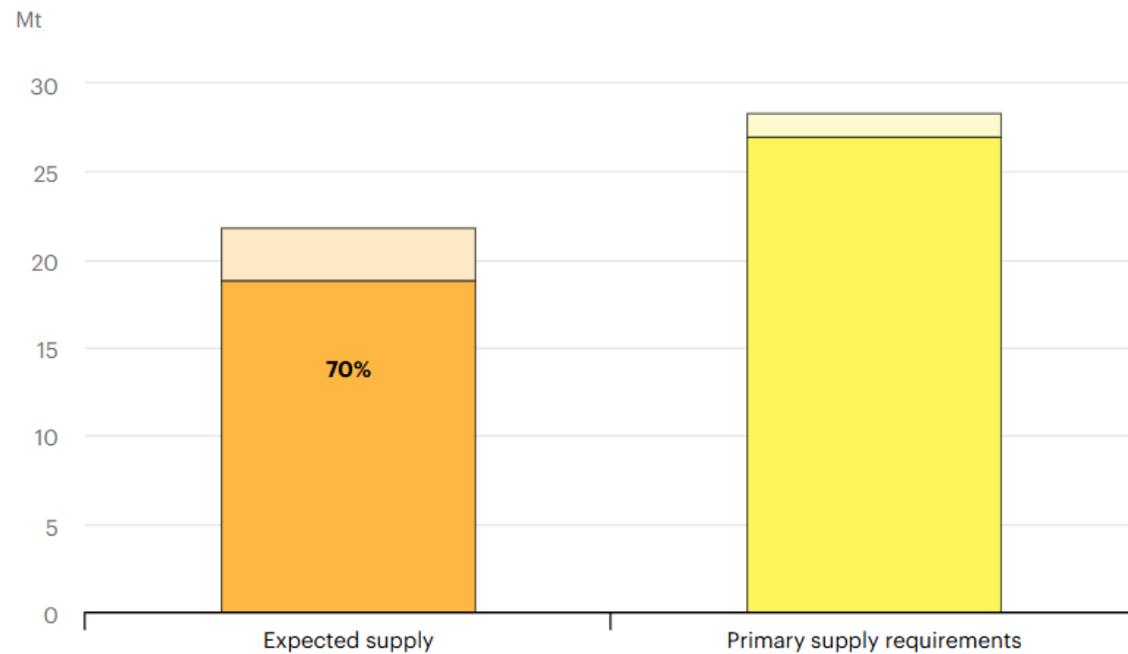
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The UNDERCOVER project has received funding from the European Union's Horizon Europe Research and Innovation Programme under Grant Agreement N.101177528.c

# The energy transition faces a looming supply roadblock

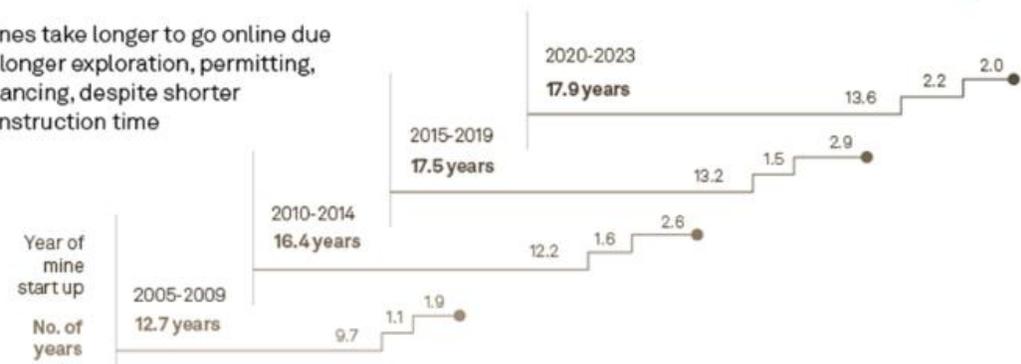
Expected mine supply from existing and announced projects and primary supply requirements for copper, 2035



Mines take an average of **16.3 years** from discovery to production



Mines take longer to go online due to longer exploration, permitting, financing, despite shorter construction time



Data compiled March 2024.  
Image credit: Chris Allen Villanueva.  
Source: S&P Commodity Insights.  
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## Opposition to exploration challenges Europe's energy and industrial policy

### Rio Tinto lithium mine: thousands of protesters block roads across Serbia

Crowds chanted slogans condemning government of Aleksandar Vučić, which backs planned Anglo-Australian \$2.4bn mine

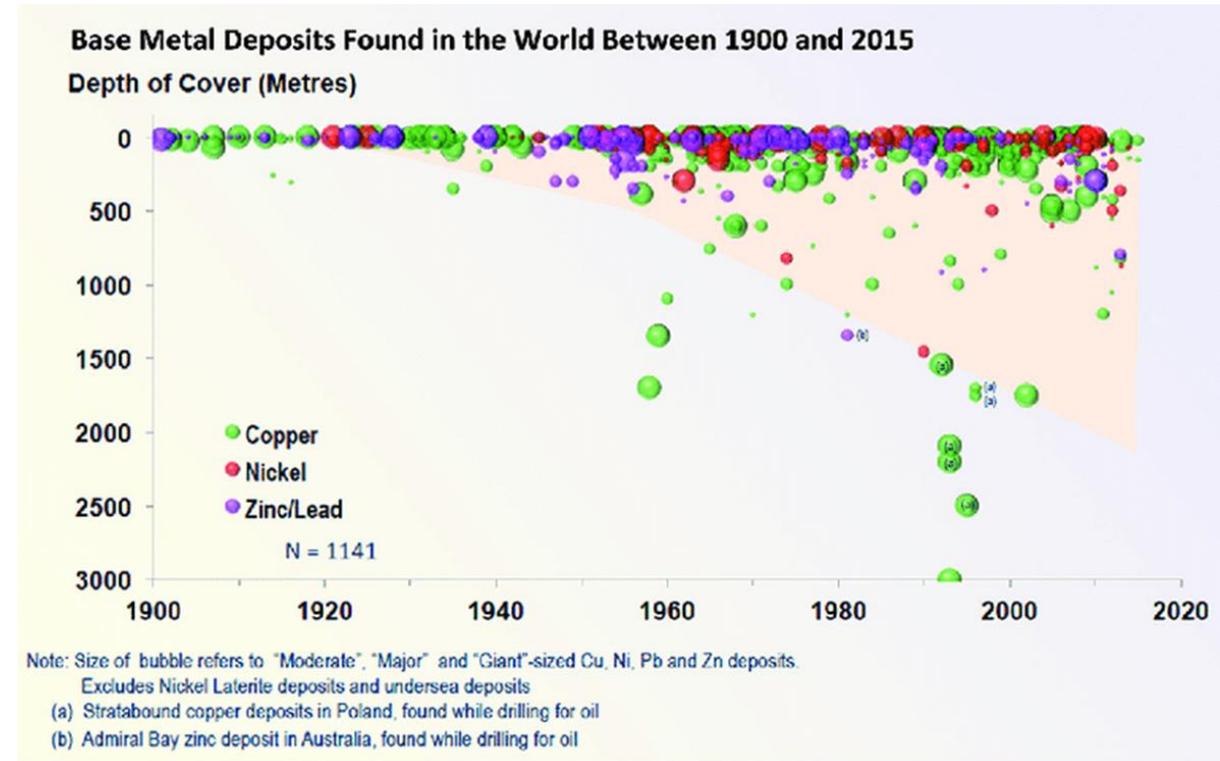


📷 Demonstrators block a highway on Saturday to protest against Rio Tinto's plan to mine lithium in Serbia. Photograph: AFP/Getty Images

# The UNDERCOVER Project

## Re-defining deep earth exploration

- Cutting-edge technologies and methodologies that enhance the accuracy, sustainability, and efficiency of mineral exploration
  - **Mineral Systems Modelling** to predict new prospective areas
  - **Advanced Geophysical Surveys** to explore deep underground
  - **Airborne technologies** to map high potential areas from the sky
  - **Artificial Intelligence** to turn Data into Discoveries



## Three unique case studies

- **Finland - Kuusamo Schist Belt**
  - Au, Co, Ree and Cu
  - Near Russian border and Arctic circle with a long history of natural resource disputes and important nature based tourism (skiing, second homes)
- **Portugal - Iberian Pyrite Belt**
  - Cu, Pb, Zn, Sn, Ag, Au, In, Ga, Ge, Ve and Se
  - Mediterranean region with a history of mining and mixed agroforestry land use (montado system)
- **Namibia - Kalahari Copper Belt**
  - Cu, Ag
  - Desert savannah with very low population density and locals engaged primarily in ranching cattle and game



# Embedding ESG within mineral exploration

## Our approach in UNDERCOVER

- Mapping key local stakeholders in each case study
- Promoting transparent and consistent communication between exploration companies and local stakeholders
  - Informing locals about planned exploration activities and project research
- Assessing local socio-economic and environmental conditions
  - Identifying potentially sensitive parts of the ecosystem and and culturally important land uses
- Baseline/ ex-ante/ ex-post study
  - Determining the potential for innovations to reduce environmental impacts and strengthen social license to operate
  - Comparison with business as usual



## A few (preliminary) conclusions

- Confusion between mineral exploration and mining is widespread
  - This can result in inflated expected impacts of exploration
  - Both of expected positive economic benefits and feared negative environmental impacts
- Critical mineral exploration highlights the inevitable tradeoffs between global, national and local concerns
- Securing a strong social license to operate requires exploration companies to consistently and proactively communicate about their work and directly address local stakeholder priorities
- Non-invasive technologies can help improve acceptance of mineral exploration by reducing the need for drilling





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# Thank you.

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## Sources – and suggestions for further reading

- Agence France-Presse. «Rio Tinto lithium mine: thousands of protesters block roads across Serbia.» *The Guardian*, 5 December 2021.
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