



## UNFC: Empowering Europe's Supply of Critical Raw Materials

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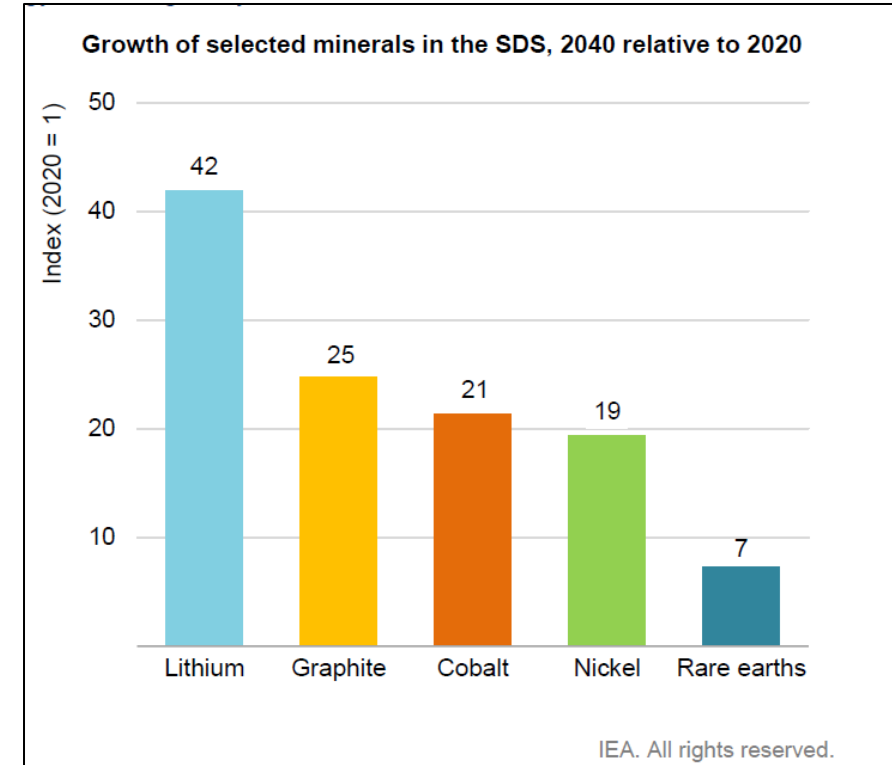
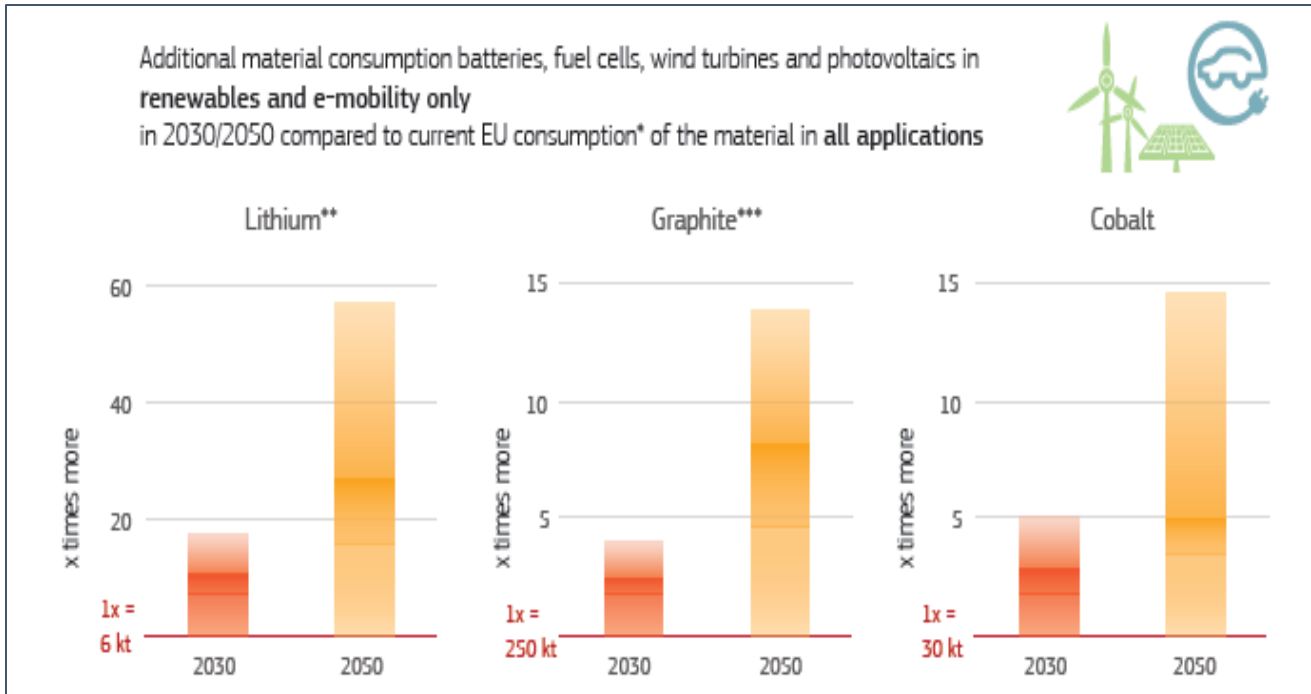
25 April 2023



Our world is changing faster than ever to face a rapid succession of crises (climate, Covid19, Russian invasion of Ukraine, energy, etc.)

To limit the magnitude of climate change, we need an energy revolution and the reduction of GHGs. Renewable energies and electric mobility require a lot of mineral and metallic raw materials (whatever the scenario!)

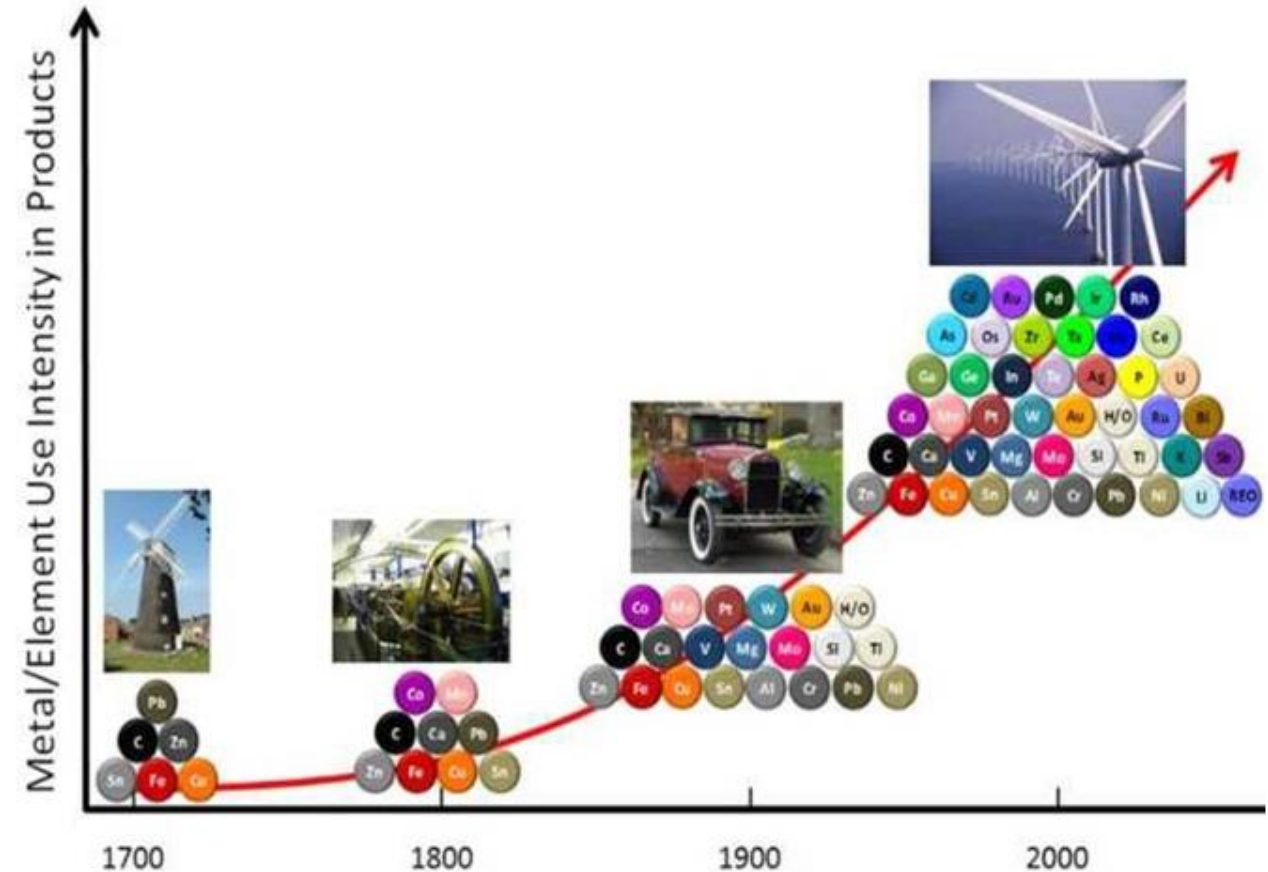
European Commission, Critical materials for strategic technologies and sectors in the EU - a foresight study, 2020



IEA (2021), *The Role of Critical Minerals in Clean Energy Transitions*, IEA, Paris, License CC BY 4.0



- **The exponential development of information and digital technologies relies on a physical infrastructure:**
  - High energy consumption (approx. 5% of global energy) → approx. 21% in 2030, according to scenarios (45% for manufacturing, 55% for usages);
  - High consumption of materials (devices, data centers, data networks, energy demand, etc.).
- **The demand for metals and materials rapidly increases (in volumes and diversity) with our lifestyles and the world population.**



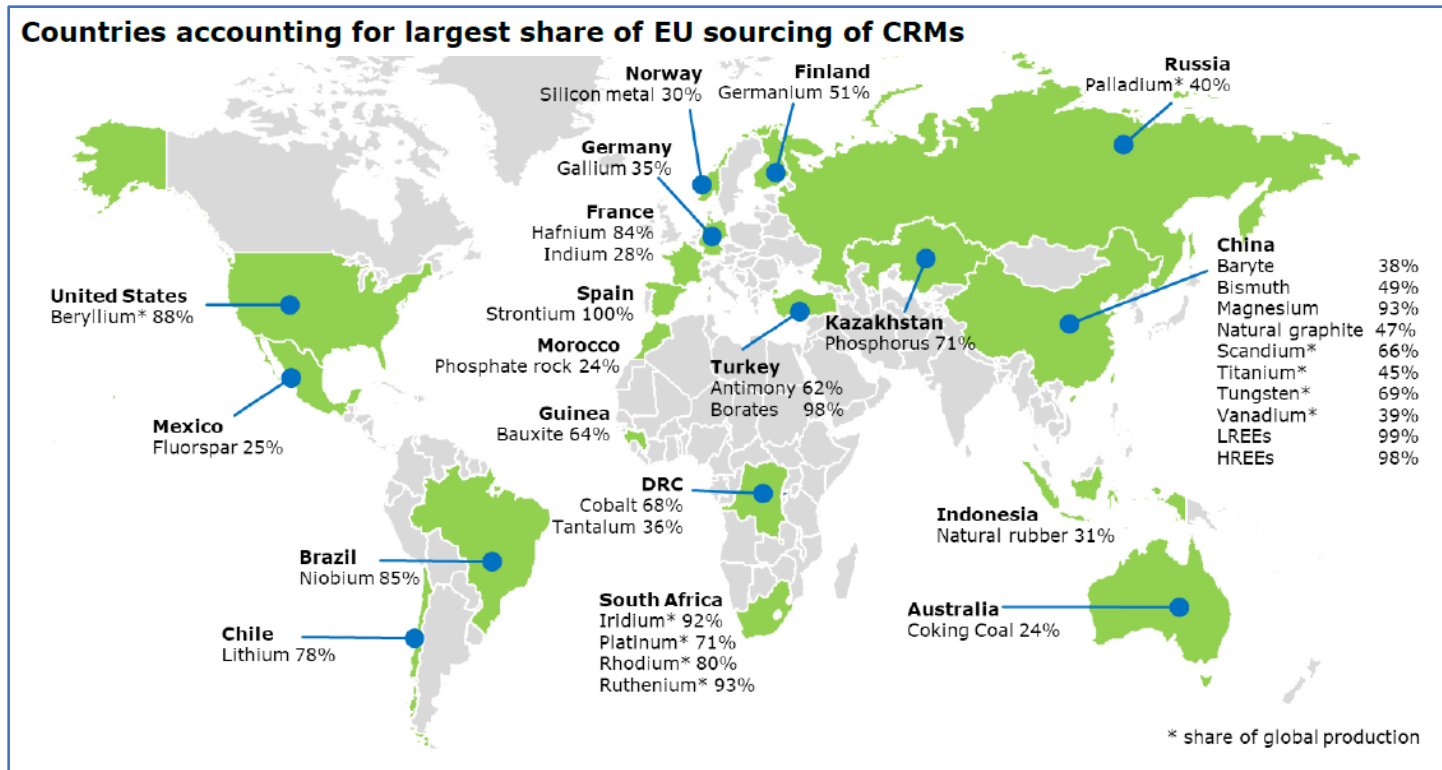
Achzet & Reller (2011), *Powering the Future*.

# The Challenge for Europe



European industry strongly depends on importation from third countries.

e.g. 68% of Co comes from DRC, 78% of Li from Chile, 98% of REE from China; In this context, the EC publishes a list of CRM, last updated in 2023 (with list of SRM).



European Commission, Study on the EU's list of Critical Raw Materials – Final Report (2020)



**To go further, the EC has submitted in 2023 a Critical Raw Materials Act, that sets ambitious objectives:**

- Union extraction capacity to produce at least 10% of its annual consumption of SRM
- Union processing capacity to produce at least 40% of its annual consumption of SRM
- Union recycling capacity to produce at least 15% of its annual consumption of SRM

... by 2030!



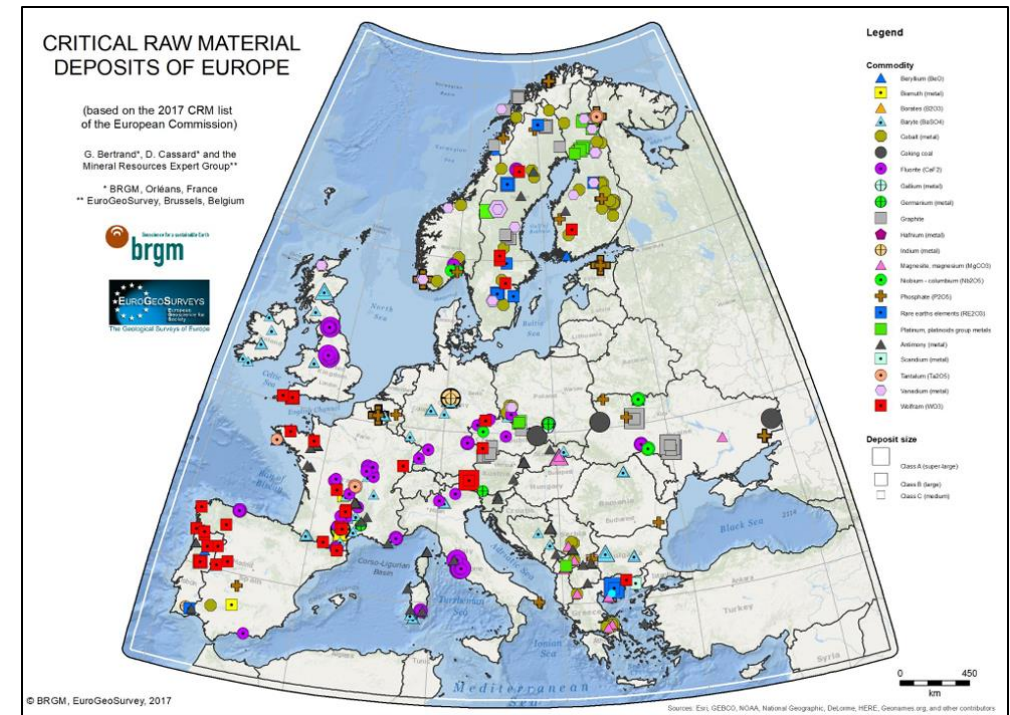
## Europe critically needs to secure its supplies in CRM:

- Despite its dependency to third countries for its supplies, Europe still has a significant geological potential;
- Relocation of extraction and production in European countries is possible.

## ... but, this will require

- large investments (with often long and hazardous returns);
- large amounts of data ;
- Time (the average time to open a mine is 17 years)

→ Time is a major issue to face a surging demand of CRM !



# UNFC: a Tool to Meet EU's ambitions

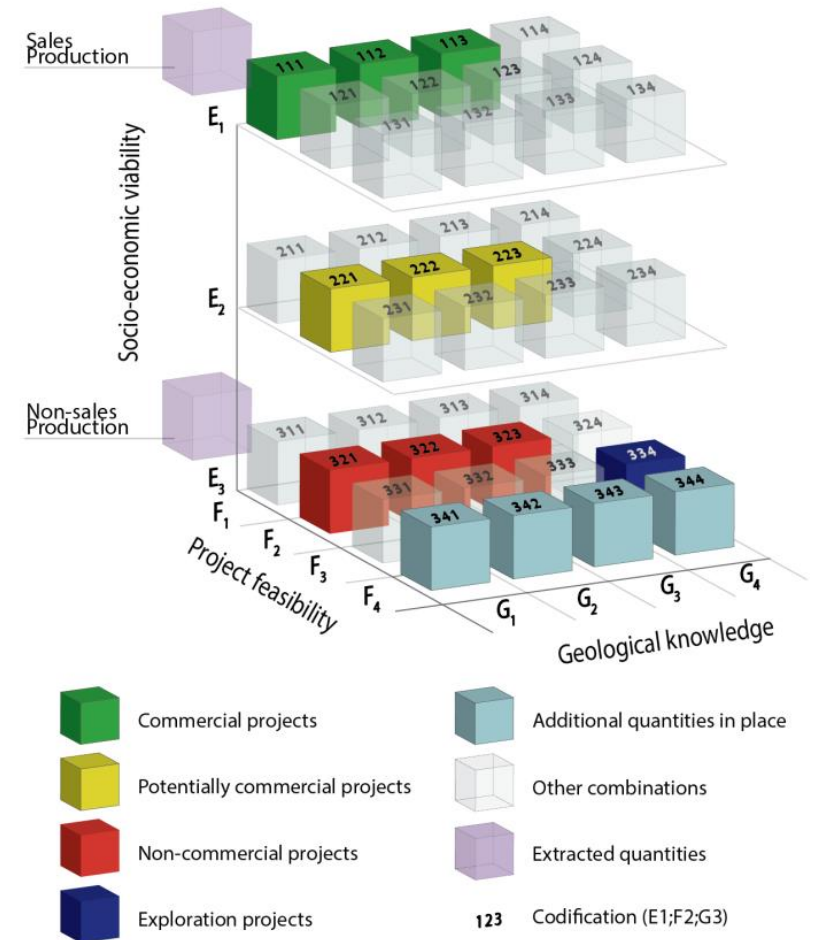
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- UNFC allows to identify the most promising projects;
- UNFC also allows to measure and trace the maturity of projects;
- As such, UNFC helps attracting and focusing investments on “best” projects;
- It does not replace other systems (e.g., JORC, NI-43101, etc.), but provides additional information (i.e., ESG, important for investors and crucial to the EU minerals strategy and policy)

**UNFC is a crucial tool to help increasing and securing EU's CRM supplies.**

**The European NGOs, in the GSEU project (coord. by EuroGeoSurveys) are committed to developing the use of UNFC to help in relocating CRM production in Europe (more presentations to come today).**



From “United Nations Framework Classification for Resources - update 2019”, ECE Energy Series No. 61, by United Nations Economic Commission for Europe, ©2020 United Nations. Used with the permission of the United Nations.

# Take Away Messages

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- European industry largely depends on foreign countries for its supply in most CRMs
- The demand for CRM is expected to surge in the coming years
- Despite being an old mining continent, Europe still has a significant potential for many CRMs
- Relocating extraction and production of CRMs in Europe requires lots of investments
- **Time is a critical issue** to face a rapidly increasing demand for CRM !
- By evaluating and tracing the maturity of projects, UNFC is a crucial tool to tackle the challenge of securing European's supplies of CRMs
- EuroGeoSurveys and the GSEU project will coordinate European GSOs to develop the use of UNFC for the classification of primary and secondary CRM resources in Europe.





# Thanks for your attention

## I wish you all a great conference !

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