



# EU policy on raw materials

REESILEX and REESILEX webinar

18.01.2024

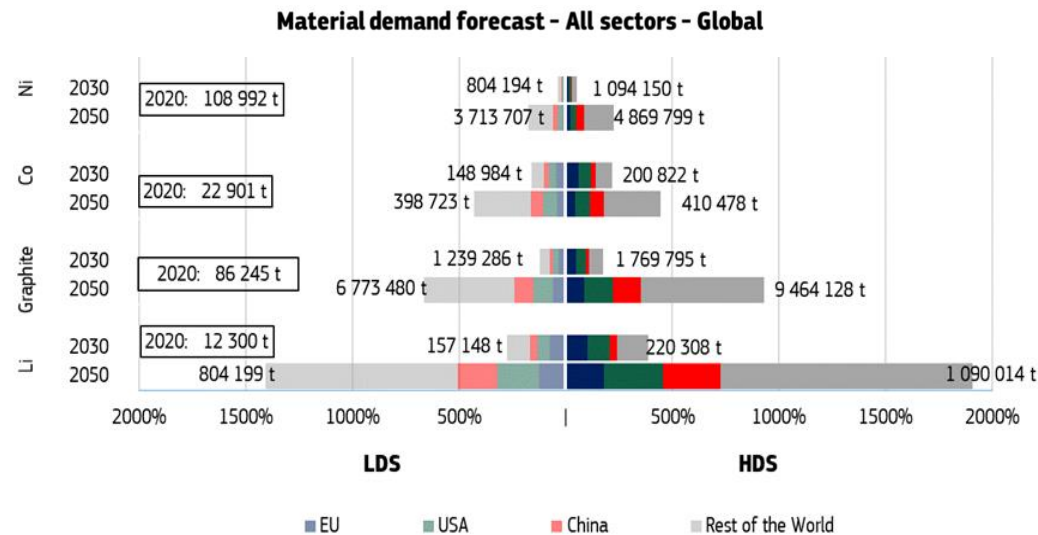
**Daniel Cios**

Policy Officer

*GROW I.1 – Energy Intensive Industries  
and Raw Materials*

# Critical raw materials (CRMs) and the EU economy

- Driven by the twin transition and defence needs, significant growth in CRM demand, with risk of global supply/demand imbalance



- EU is heavily dependent on third country supply for CRMs that are key for strategic technologies
- Strategic dependencies and risk of supply chain disruption

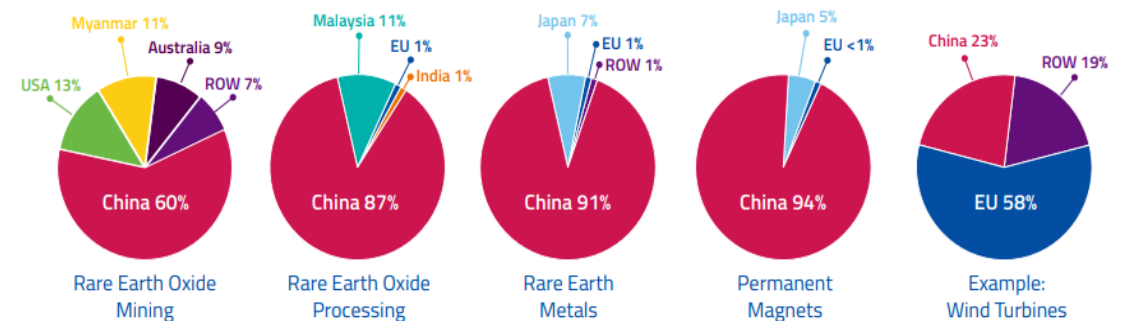
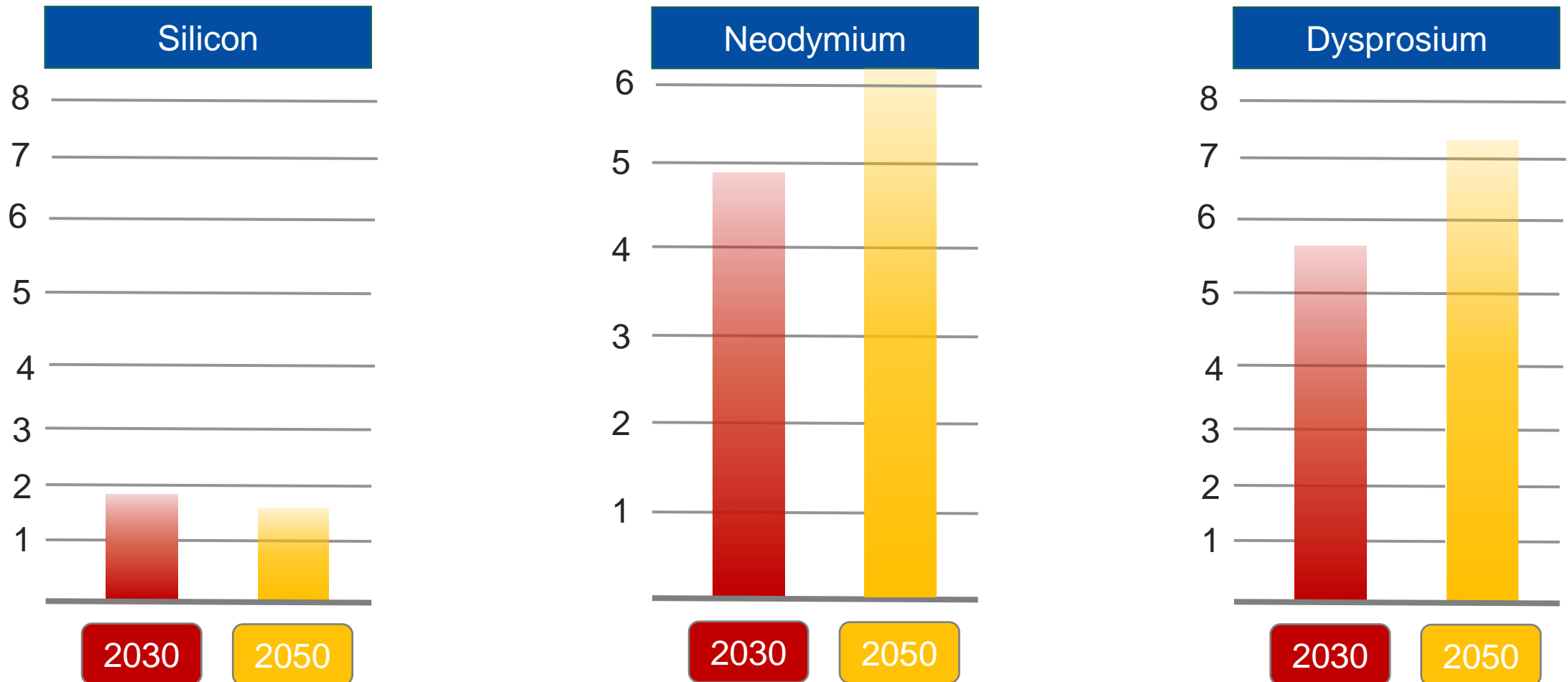


Fig. 3: From rare earths mining to wind turbine manufacturing; estimated market shares in 2019. Sources: Team analysis and Roskill 2018; Adamas Intelligence 2019; Peteves 2017; Carrara et al. 2020; IEA 2021; USGS 2021.

Source: European Raw Materials Alliance (ERMA)

# The demand for raw materials will increase



**Source:**  
*Supply chain analysis and material demand forecast in strategic technologies and sectors in the EU – A foresight study, Joint Research Centre, European Commission, 2023*

# European Critical Raw Materials Act

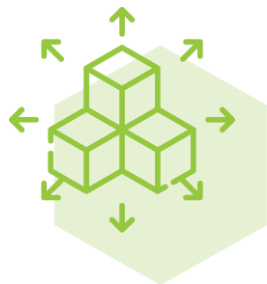
Ensuring a secure and sustainable supply of critical raw materials for the Union



**Strengthen all stages of the European CRM value chain**



**Improve EU capacity to monitor and mitigate risks of disruption to CRM supply**



**Diversify EU CRM imports to reduce strategic dependencies**



**Improve CRM circularity and sustainability**



# Setting Priorities

## DEFINING CRITICAL AND STRATEGIC RAW MATERIALS

### CRM

Whole EU economy, based on :

- supply risk
- economic importance

### SRM

SRM are a subset of CRM:

- Key for strategic technologies (green, digital, defence and space)
- Forecast demand risks outstripping supply

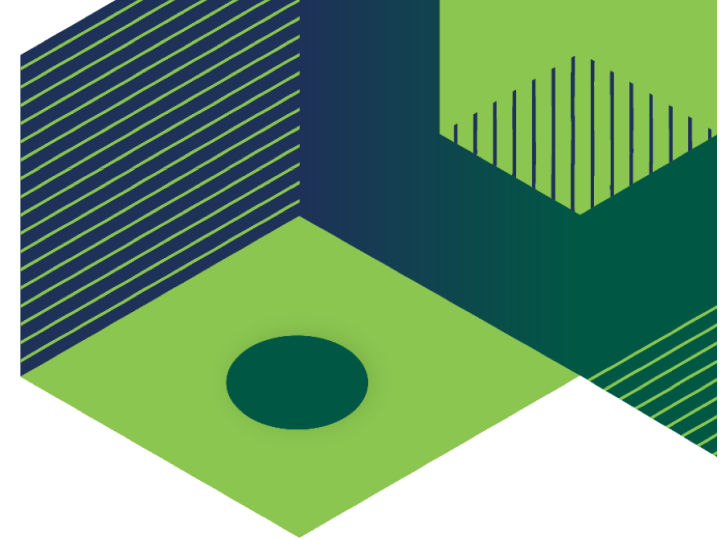
## 2030 BENCHMARKS

### Towards more SRM supply security

- EU's extraction capacity cover at least **10%** of the EU's SRM consumption
- EU's processing capacity cover at least **40%** of the EU's SRM consumption
- EU's recycling capacity cover at least **25%** of the EU's SRM consumption

### Towards more diversification of supply

- Not more than **65%** of EU consumption of each SRM should come from a single third country.



# Critical Raw Materials

**Note:** A subset of the CRMs are classified as „**strategic raw materials**“ due to their use in strategic technologies and strong projected demand growth. Certain measures under the CRMA apply only to them.

## 34 RAW MATERIALS DEFINED AS CRITICAL BY THEIR HIGH

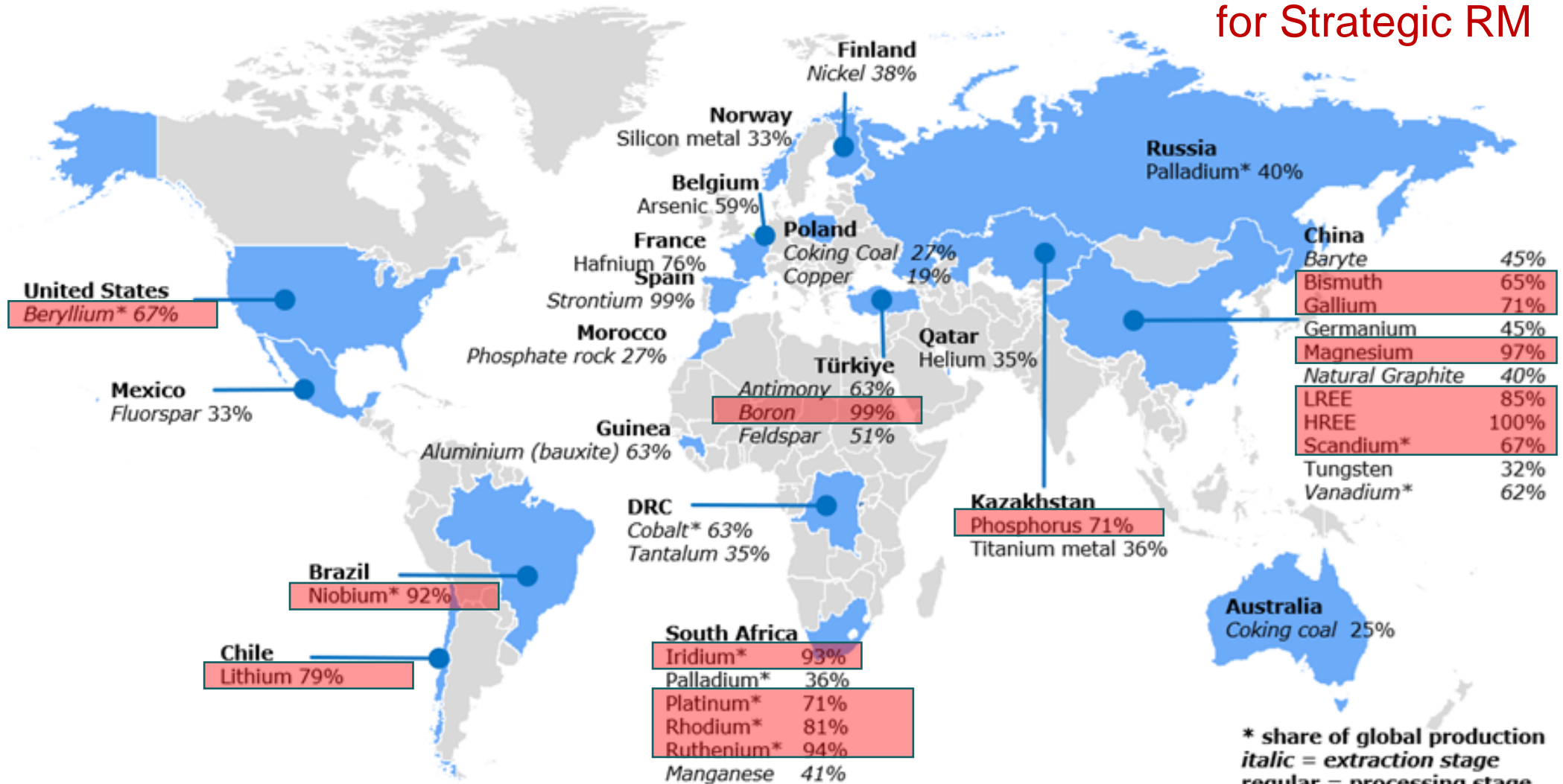
- Economic importance
- Supply risk

... based on a regular assessment of available data in an established methodology

- Antimony
- Arsenic
- **Bauxite/Aluminium**
- Baryte
- Beryllium
- **Bismuth**
- **Boron**
- **Cobalt**
- Coking Coal
- **Copper**
- Feldspar
- Fluorspar
- **Gallium**
- **Germanium**
- Hafnium
- Helium
- **Heavy Rare Earth Elements**
- **Light Rare Earth Elements**
- **Lithium**
- **Magnesium**
- **Manganese**
- **Graphite (Natural and synthetic)**
- **Nickel – battery grade**
- Niobium
- Phosphate rock
- Phosphorus
- **Platinum Group Metals**
- Scandium
- **Silicon metal**
- Strontium
- Tantalum
- **Titanium metal**
- **Tungsten**
- Vanadium

# Dependencies in the EU supply of CRMs

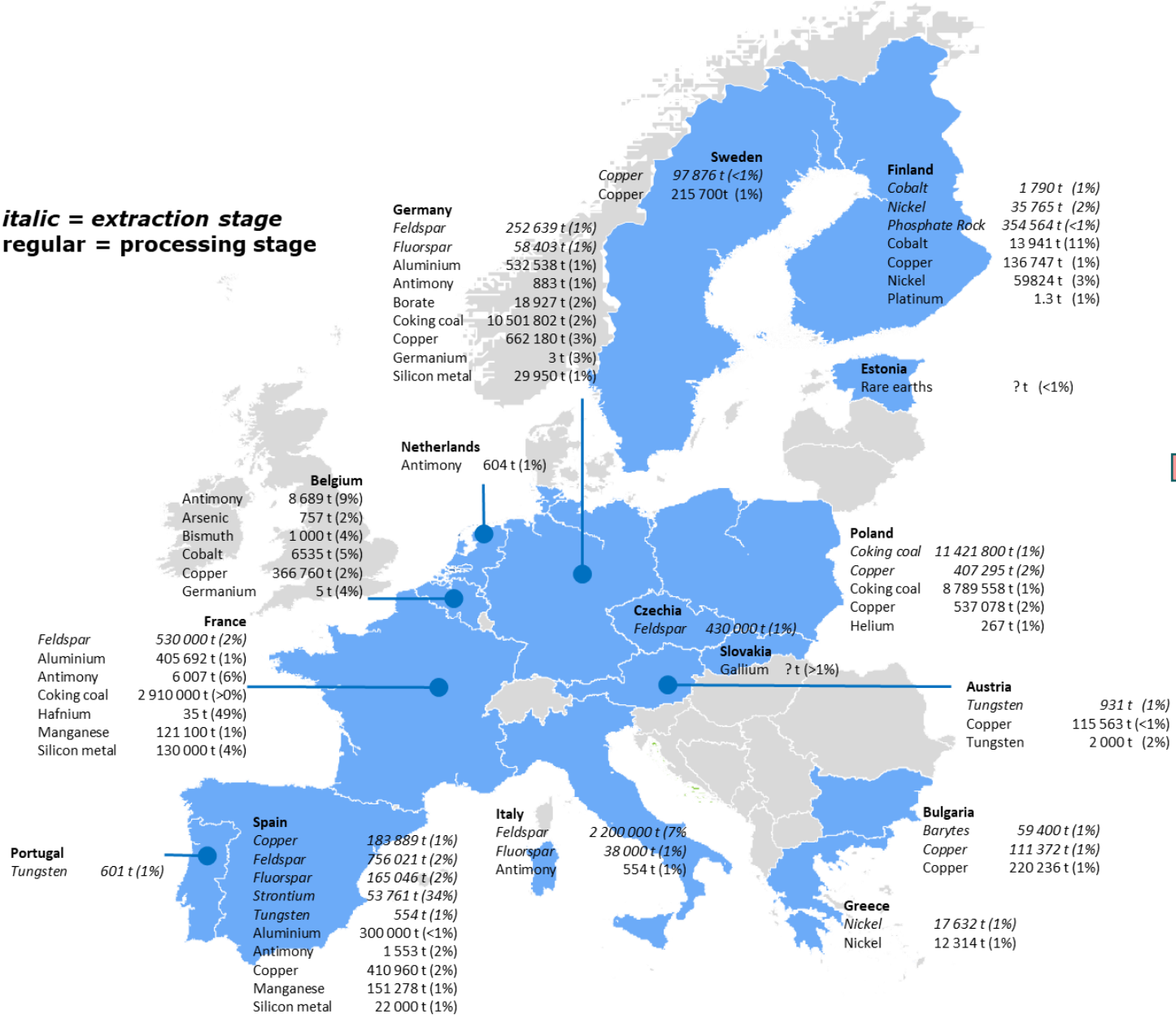
➔ Diversification  
benchmark of 65%  
for Strategic RM



Source: "European Commission, Study on the Critical Raw Materials for the EU 2023– Final Report"

# EU producers of CRMs (shares of global supply, 2016-2020 )

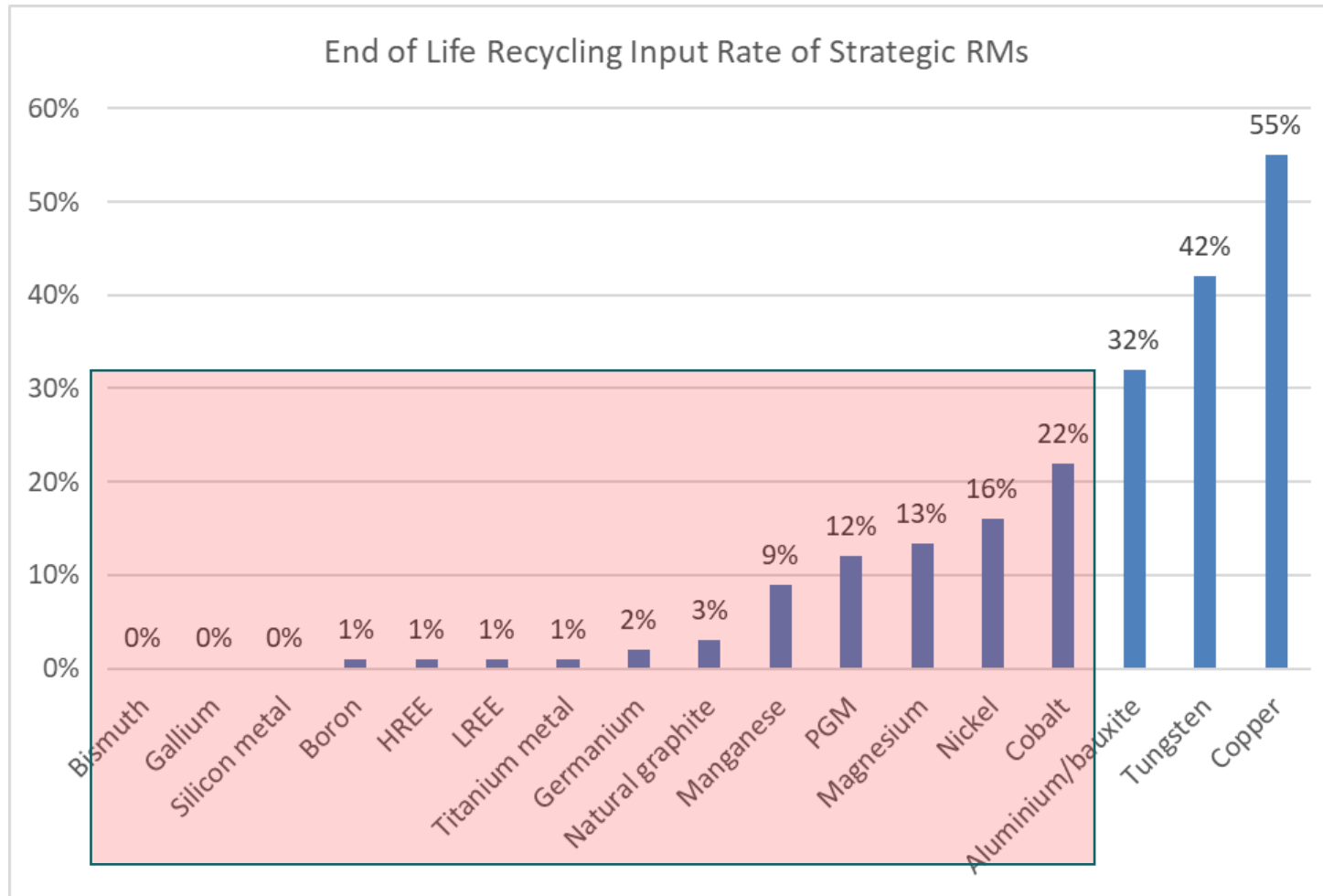
*italic = extraction stage*  
**regular = processing stage**



➔ Extraction and processing capacity benchmark of 10% and 40% for Strategic RM



# Recycling's contribution to meeting materials demand for SRMs



➔ Recycling capacity benchmark of 25% for Strategic RM

# Strengthening the value chain

## STRATEGIC PROJECTS

Across the whole SRM value chain: extraction – processing – recycling  
and for production of substitute materials

**Selected by the Commission with advice from the Board based on**

- Contribution to security of supply
- Sustainability
- Technical feasibility
- Cross-border benefits in **EU**/ Economic and social benefits in **third countries**

## Non-Regulatory Measures

- Financial Support
- Standardisation
- Skills
- Research and Innovation

## BENEFITS

- **Priority Status in national and EU law:** for administrative and judicial procedures
- **Points of Single Contact in Member States**
- **Permitting - Legal time-frames**
  - Extraction: 27 months
  - Processing & Recycling: 15 months
- Provisions to facilitate and timely deliver **environmental assessments and authorisations without weakening environmental and social protection**
- **Enabling conditions to implement Strategic Projects**
  - The Critical Raw Materials Board provides coordination and advice to secure remaining financing
  - Provisions to facilitate the conclusion of off-take agreements

# Risk monitoring and mitigation

## Risk monitoring

- **Assessment of critical and strategic raw materials**
- **Towards real time monitoring** (trade flows; demand and supply; concentration of supply; Union and global production)
- **Early warning system**

## Risk preparedness:

- **Stress testing**
- Reporting and coordination of **strategic stocks**
- Voluntary **joint purchasing**



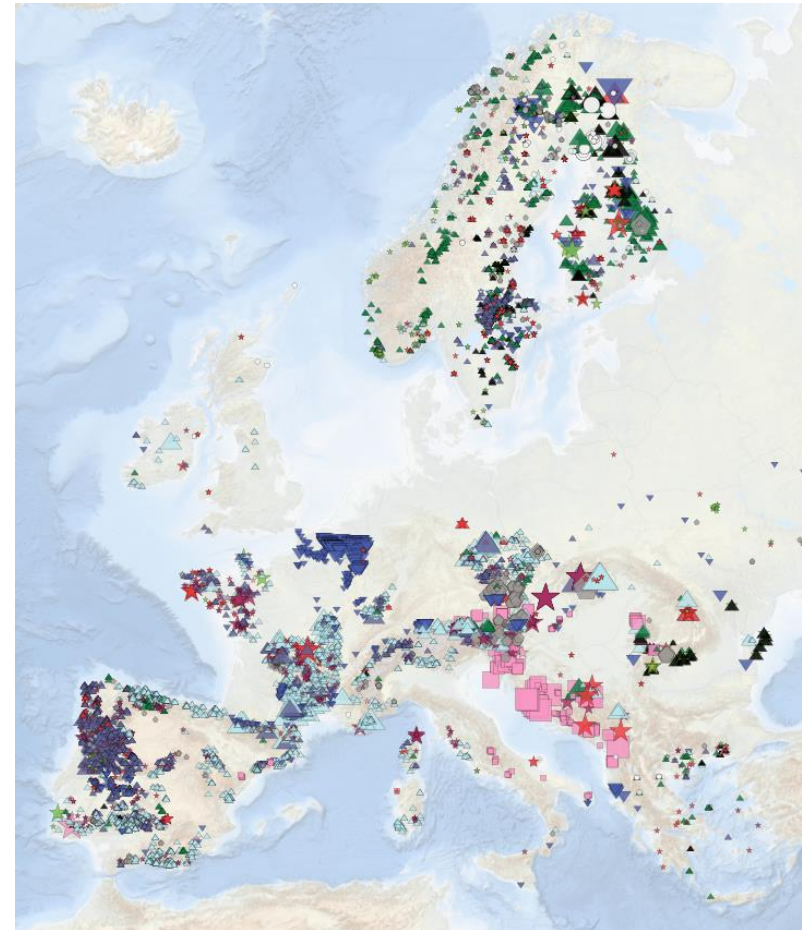
# National exploration programmes

Objective: Support the EU's CRM value chain by:

- Increasing the geological knowledge of the EU's CRM potential
- Helping de-risk targeted and private exploration campaigns

Member States are to draw up National exploration programmes on CRMs (to be reviewed every 5 years), including, as appropriate:

- mineral mapping at a suitable scale;
- geochemical campaigns (soils, sediments, rocks);
- geoscientific surveys;
- processing of the data (e.g., predictive maps);
- reprocessing of existing geoscientific survey data.



# Ensuring the free movement of SRMs with a high level of environmental protection

## CIRCULARITY

- National measures on CRMs circularity
  - Increase reuse, collection and recycling
  - Increase use of secondary RM
  - Recycling technologies
- Maximising potential from (closed) extractive waste facilities
- Recyclability and recycled content of permanent magnets

## SUSTAINABLE CHOICES

- Recognition of certification schemes on the sustainability of CRMs
- Empowerment to set, at a later stage, information requirements on the environmental footprint of CRMs placed in the EU market

## Other Regulatory Measures

- Review of End of Life Vehicles Directive
- Codes in European list of Waste
- Harmonisation of Waste Management Rules
- Review Waste Electrical and Electronic Equipment Directive

# Governance

## CRITICAL RAW MATERIALS BOARD

The Board has an advisory role supporting the Commission in the implementation of the different actions proposed in the Act.

### COMPOSITION

Chaired by the European Commission

Composed by Member States and the Commission

Representatives from the EP as observers

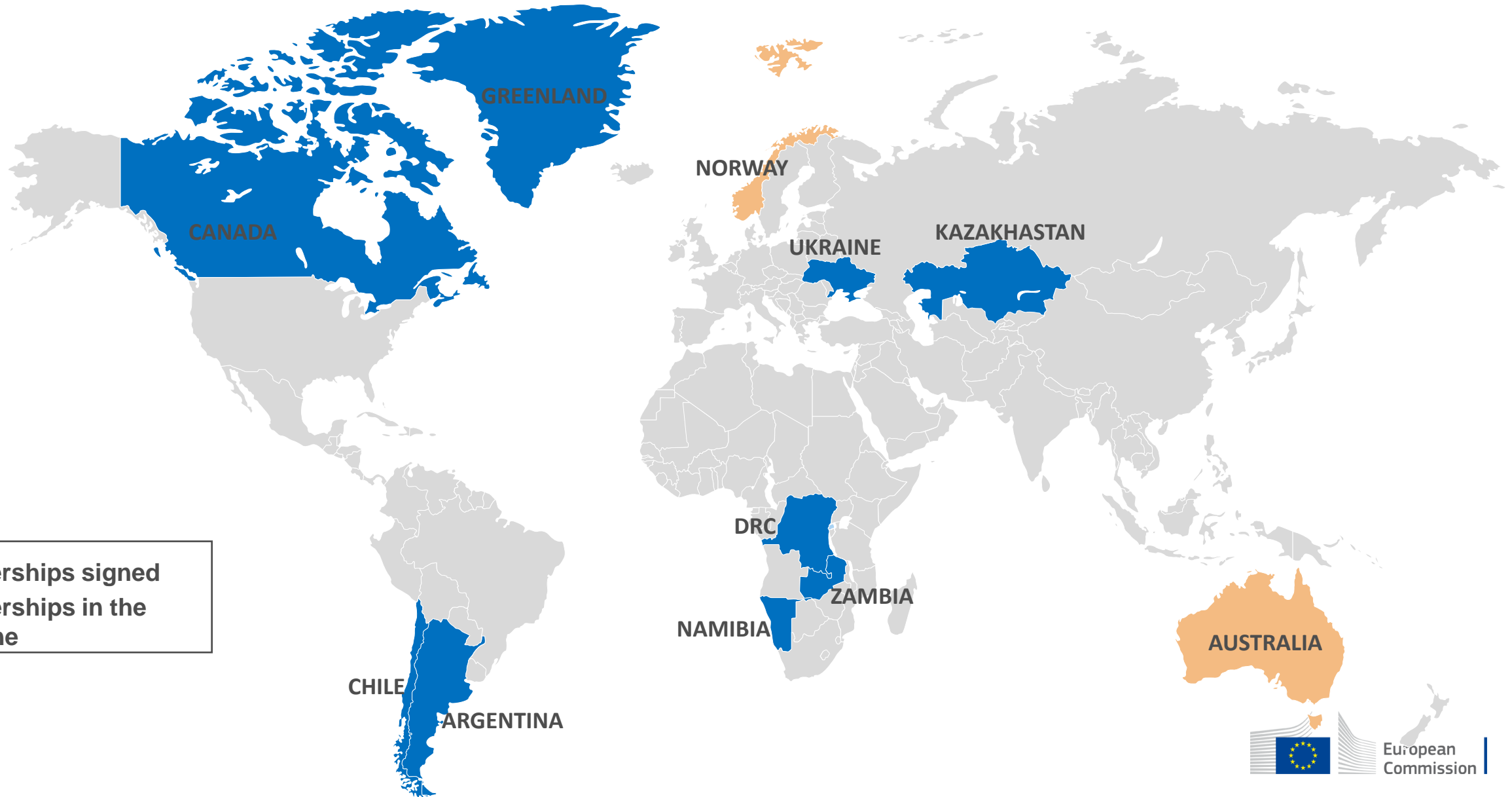
## STRATEGIC PARTNERSHIPS



The Board also discusses Strategic Partnerships of the Union with third countries that cover raw materials and ensures their coordination with other international fora and initiatives.

## Non-Regulatory Diversification Measures

- International initiatives (MSP, CRM Club, G7, etc.)
- Trade and Investment Agreements
- Lowering risk of investing abroad (Export Credit Agencies, etc.)

# Strategic Partnerships Raw Materials



 Partnerships signed  
 Partnerships in the pipeline

# Next Steps – Implementation

## Entry into Force of Regulation expected in Q2 2024 (tbc)

- Setting Up of **Governance and Monitoring**
- First Meeting of the **Critical Raw Materials Board**
- First cut-off date for open call for **Strategic Projects**

## Complementary actions to Regulation

- Continued **R&D funding** via Horizon Europe
- **Financial Support for Strategic Projects**, for example from Innovation Fund and EIT funded opportunities
- **Skills** via Raw Materials Academy



# Useful links

[CRM Act Press Release](#)

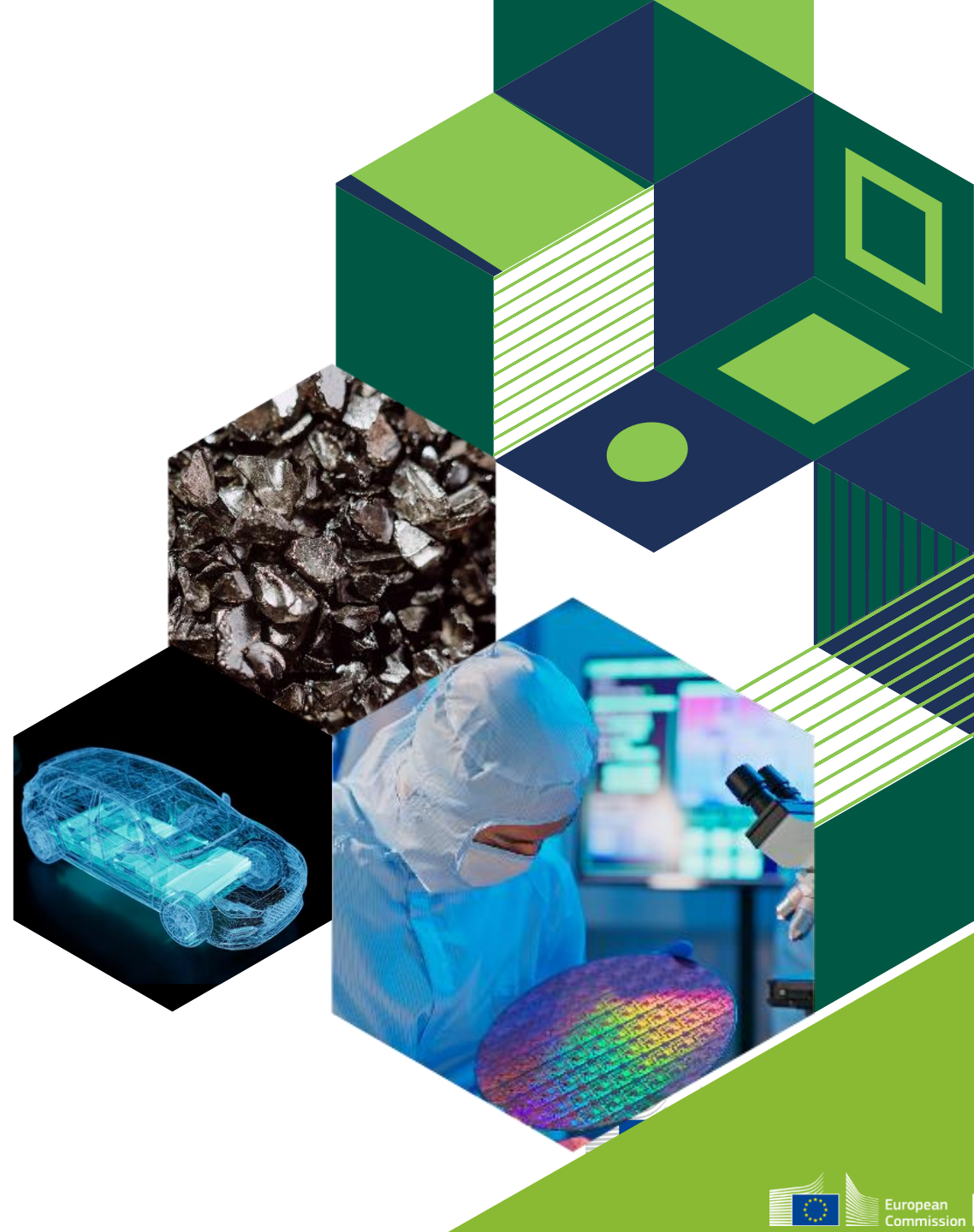
[CRM Act \(Draft Regulation\)](#)

[CRM Act \(Communication\)](#)

[2023 JRC Foresight Study](#)

[2023 Study on CRMs for the EU](#)

[CRM Factsheets](#)



# Thank you



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.



# Raw Materials in Horizon 2020 (2014-2020)

**~ EUR 600 mln budget**

Exploration	9 projects	EUR 55 mln
Extraction	15 projects	EUR 121 mln
Processing	19 projects	EUR 151 mln
Substitution	4 projects	EUR 19 mln
Reuse, recycling, recovery	6 projects	EUR 57 mln
Policy support	22 projects	EUR 43 mln

Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes

TOPIC ID:

CE-SC5-07-2018-2019-2020

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/ce-sc5-07-2018-2019-2020;callCode=H2020-SC5-2018-2019-2020;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=31045243;programDivisionCode=31047972;focusAreaCode=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=submissionStatus;orderBy=asc;onlyTenders=false;topicListKey=topicSearchTablePageState>

# Overview calls raw materials 2021-2024\*

## PRIMARY RAW MATERIALS

### EXPLORATION

16 projects  
€98.8m

### EXTRACTION

15 projects  
€107.7m

### PROCESSING

9 projects  
€74.3m

### THROUGHOUT THE PROCESS

#### SUPPLY CHAIN

7 projects  
€78.1m

#### POLICY SUPPORT

4 projects  
€14.8m

### REUSE, RECYCLING & RECOVERY

12 projects  
€97.9m

## SECONDARY RAW MATERIALS

### TOTAL BUDGET ALLOCATION FOR RAW MATERIALS



Research & innovation  
€456.7m



Policy support  
€14.8 m

\*Estimated budget and number of projects for 2023 2024

# **Cluster 4**

## **Digital, Industry and Space**

**Call HORIZON-CL4-2024-RESILIENCE-01**

**Opening: 19 Sep 2023**  
**Deadline(s): 07 Feb 2024**

# Call – RESILIENT VALUE CHAINS 2024

## Raw Materials for EU open strategic autonomy and successful transition to a climate neutral and circular economy

- HORIZON-CL4-2024-RESILIENCE-01-01: Exploration of critical raw materials in deep land deposits (RIA)
- HORIZON-CL4-2024-RESILIENCE-01-04: Technologies for processing and refining of critical raw materials (IA)
- HORIZON-CL4-2024-RESILIENCE-01-08: Rare Earth and magnets innovation hubs (IA)
- HORIZON-CL4-2024-RESILIENCE-01-10: Addressing due diligence requirements in raw materials supply chains (CSA)
- HORIZON-CL4-2024-RESILIENCE-01-11: Technologies for extraction and processing of critical raw materials (IA)