



**Workshop on
Implementing the United Nations Framework
Classification for Resources (UNFC) in Southeast
Europe**

**Understanding the European
Raw Materials State of Play:
EU Critical Raw Materials Act, Strategic
Raw Materials Partnerships, and the
Implementation of UNFC**

**Belgrade, Republic of Serbia
4 – 5 July 2024**

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Raw Materials

Critical and strategic



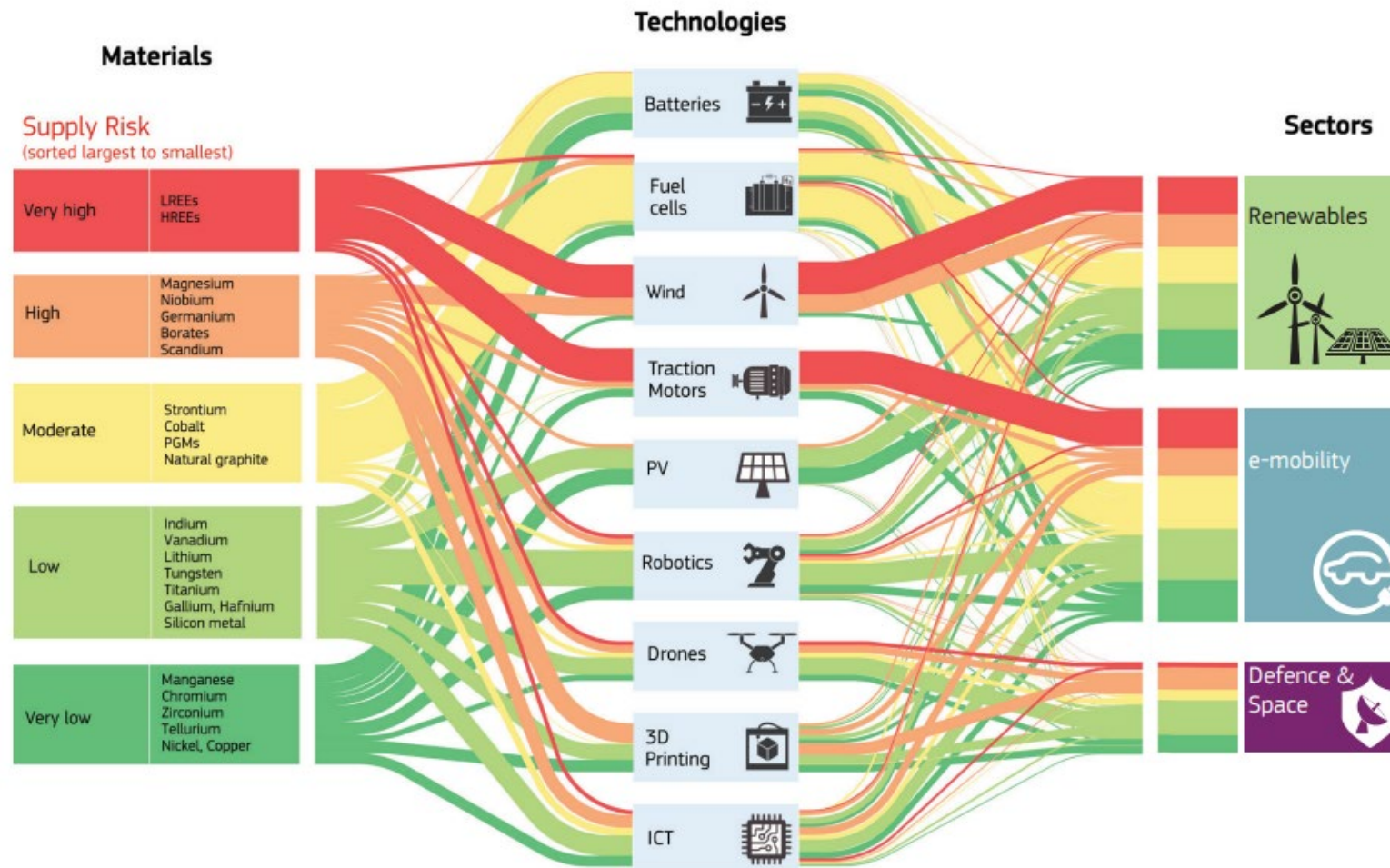
Critical Raw Materials – Economic importance

Economic importance

- Importance of a raw material per economic sector & importance of the sector in the EU economy
- Substitution (technical and cost performance)

Supply risk

- Global supply and EU sourcing (ores/refined materials)
- Market concentration (HHI)
- Governance performance (WGI)
- Import reliance
- Trade agreements and restrictions
- End-of-Life Recycling Input Rate
- Substitution (production, criticality, co/by-production)



Critical Raw Materials – supply risk 2020

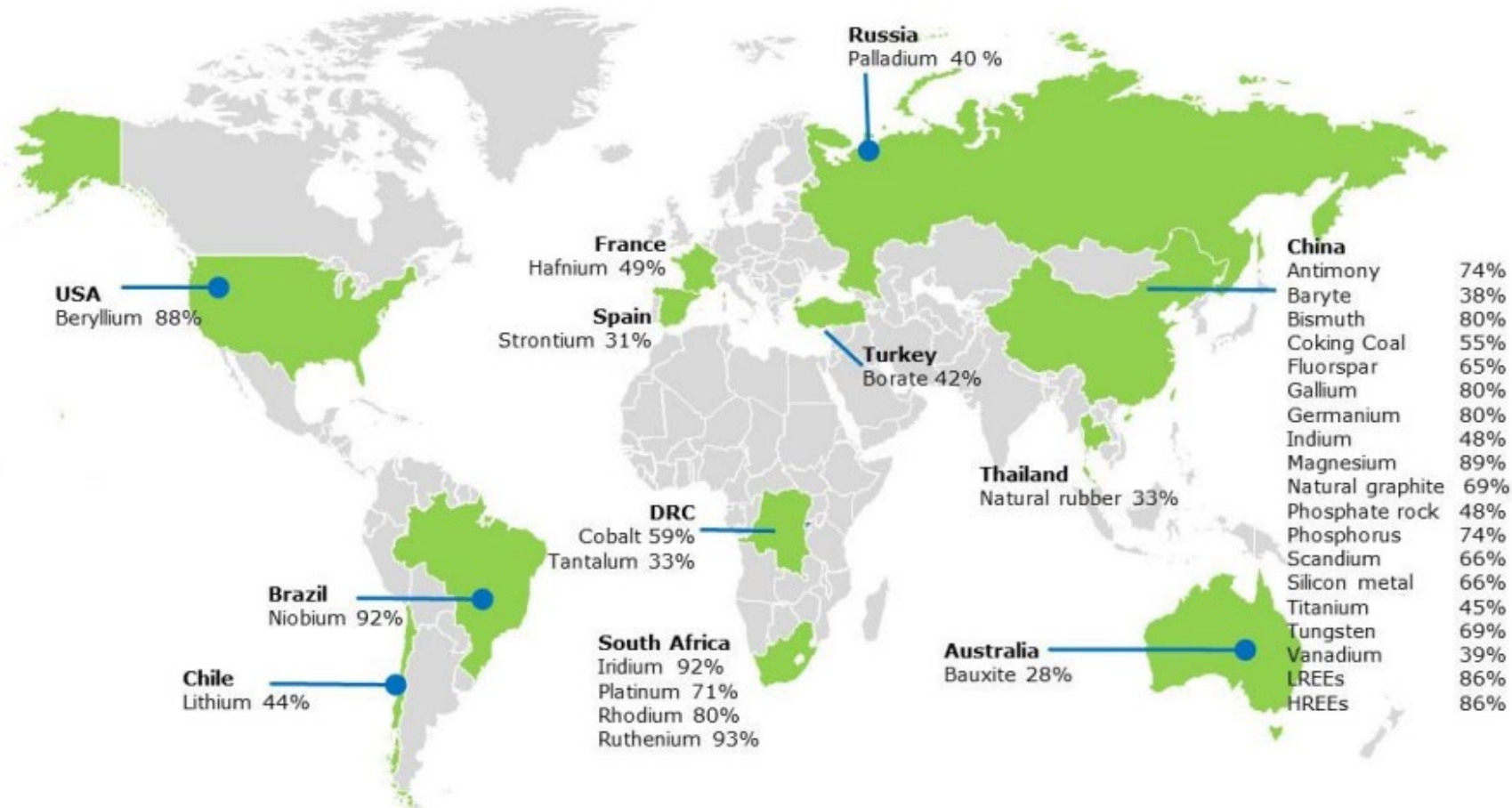
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Countries accounting for largest share of global supply of CRMs



Critical Raw Materials – supply risk 2023

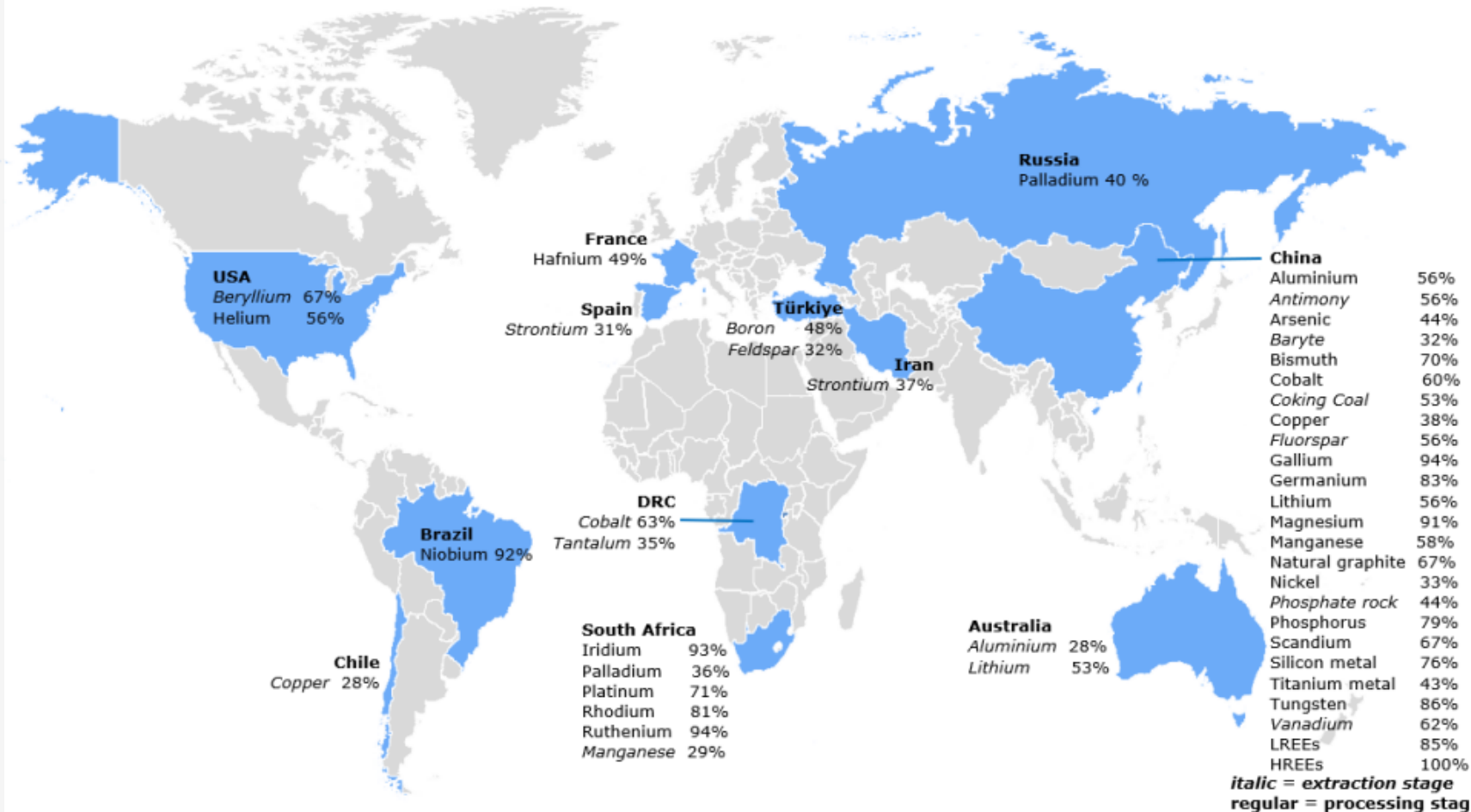
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Critical Raw Materials 2020

Critical 2020

Not Critical 2020

6

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

Critical Raw Materials 2023

New Critical 2023

Not Critical 2023

Critical 2020 — not 2023



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Strategic Raw Materials - CRMA

New Critical 2023

Not Critical 2023

Critical 2020 — not 2023

Strategic Raw Material

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Critical Raw Materials CRM

- Economic importance
- Supply risk



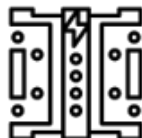


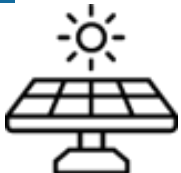


Strategic Raw Materials SRM

SRM are a subset of CRM:

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

- Antimony
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- Bauxite
- Baryte
- Beryllium
- Bismuth
- Boron
- Cobalt
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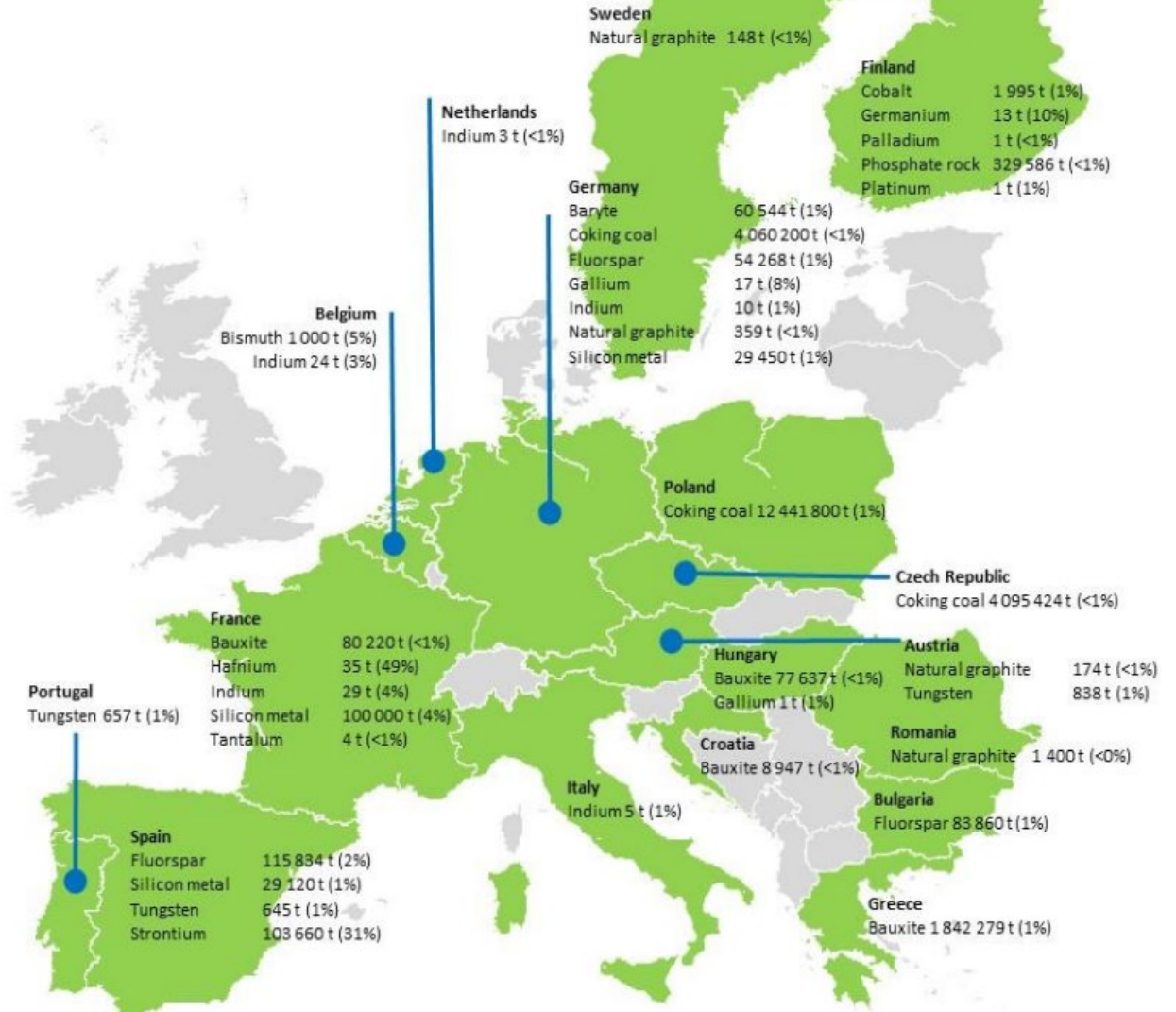
High relevance of SRM for strategic technologies

								
Bismuth								●
Boron - metallurgy grade				●	●	●	●	●
Cobalt	●						●	●
Copper	●	●	●	●	●	●	●	●
Gallium						●	●	●
Germanium						●	●	●
Lithium - battery grade	●						●	●
Magnesium metal								●
Manganese - battery grade	●						●	●
Natural Graphite - battery grade	●						●	●
Nickel - battery grade	●						●	●
Platinum Group Metals		●	●					
Magnet REE*				●	●			●
Silicon metal						●	●	●
Titanium metal								●
Tungsten								●

*(Nd, Pr, Tb, Dy, Gd, Sm, Ce)

Critical Raw Materials 2012-2016

- EU producers of CRMs
- in brackets shares of global supply
- for many CRM <1%

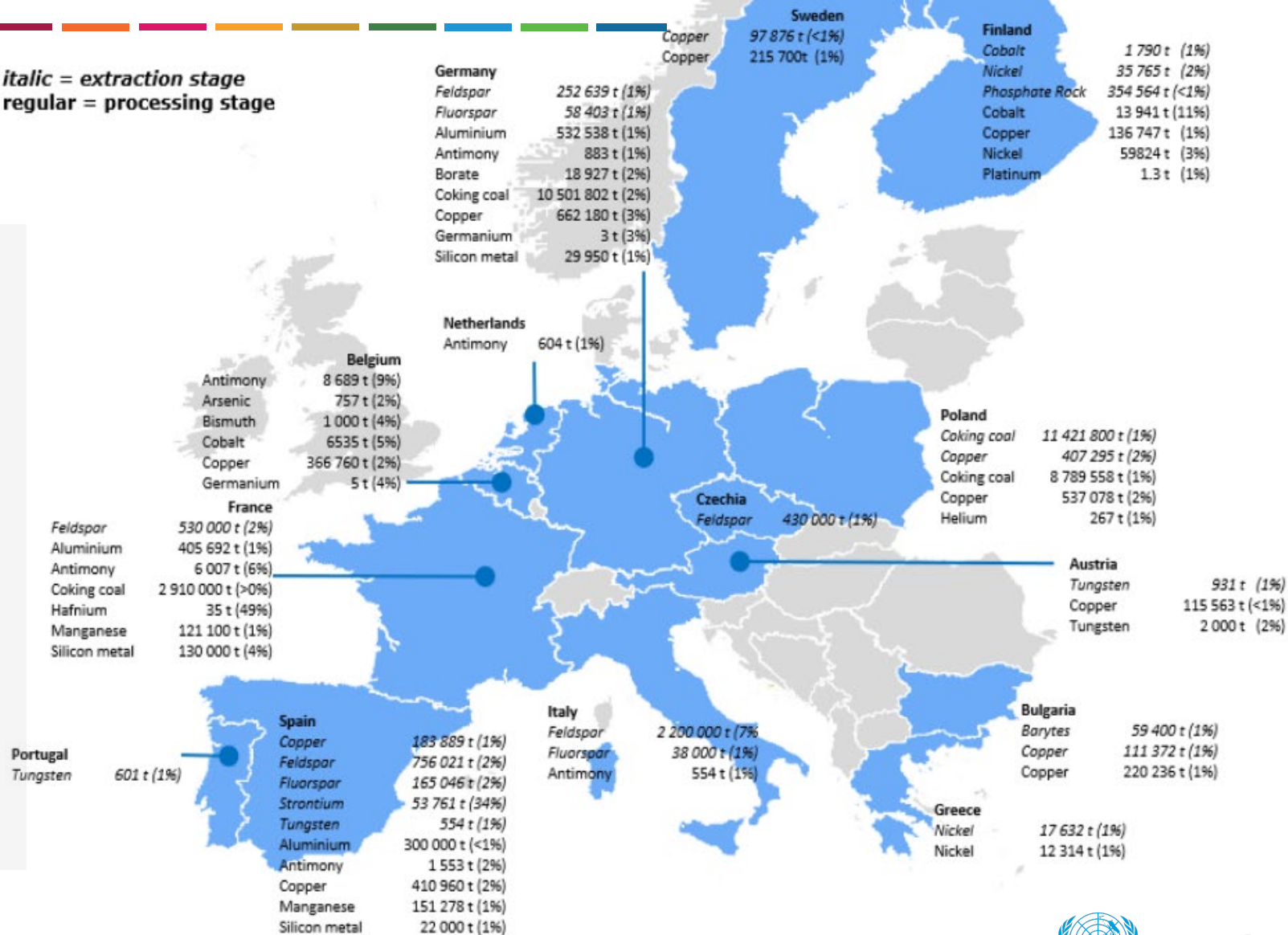


Critical Raw Materials 2016-2020

- EU producers of CRMs
- in brackets shares of global supply

- for many CRM 1-3%
- Still highly dependent on many critical and strategic minerals from non-EU countries

italic = extraction stage
regular = processing stage



EU Critical Raw Materials Act

Critical and strategic raw
materials



EU 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

CRMA – Aims and Objectives



Strengthen all stages of the European CRM value chain



Diversify EU CRM imports to reduce strategic dependencies



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



Improve CRM circularity and sustainability

SETTING 2030 BENCHMARKS FOR STRATEGIC RAW MATERIALS



EU EXTRACTION

At least **10%** of the EU's annual consumption for extraction



EU PROCESSING

At least **40%** of the EU's annual consumption for processing



EU RECYCLING

At least **15%** of the EU's annual consumption for recycling



EXTERNAL SOURCES

Not more than **65%** of the EU's annual consumption of **each strategic raw material at any relevant stage of processing** from a single third country

CRMA – concrete measurements

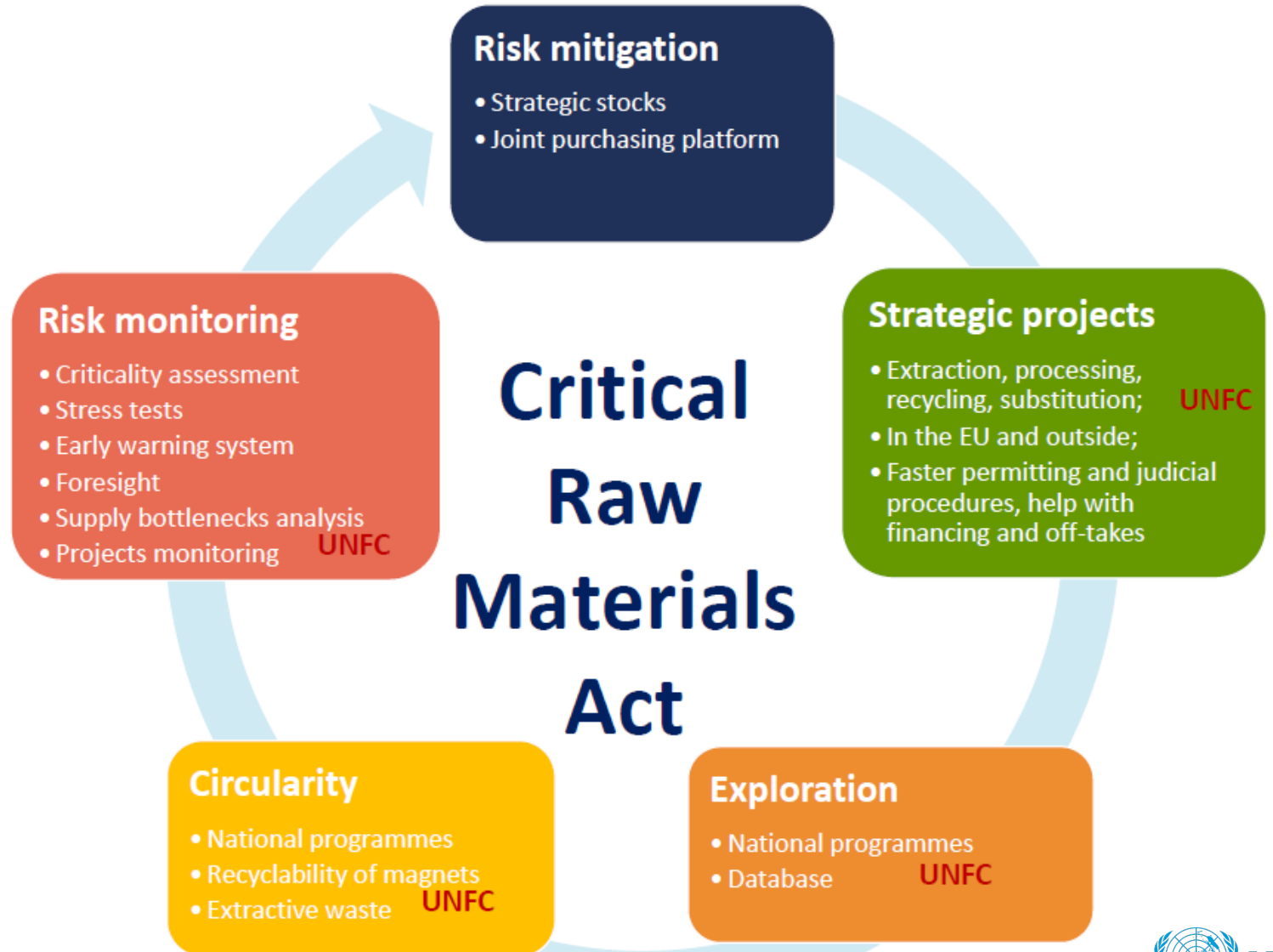
Critical Raw Materials

→ Whole EU economy

Strategic Raw Materials

→ Key for strategic technologies (green, digital, defence and space)

→ €6 billion funds established by France, Germany and Italy (and €30 million by Ireland)



EIT Raw Materials

ERMA

**European Raw Materials
Alliance**



EIT Raw Materials established in 2015 to support securing the supply of CRM to the European industry by driving innovation along the raw materials value chain

World's Leading Partner Network

300+
MEMBERS

400+
START-UPS

Entire Value Chain Coverage



→ lead and manage the European Raw Materials Alliance (ERMA)



European Raw Materials Alliance - ERMA



Open and independent forum for discussion and analysis, as well as a mechanism for translating potential projects into actual activities and infrastructures

1. Value chain-specific consultation processes:

- Identify and respond to raw material challenges along industrial ecosystems and within the wider society
- Provide tailored solutions to industry needs
- Unlock regulatory bottlenecks
- Promote stakeholders' strong engagement and commitment through an open process

2. Investment channel for raw materials projects:

- Select and prioritize cases to secure primary and secondary raw materials supply for European industrial ecosystems
- Install Raw Materials Investment Platform (RMIP) to bring investors and investees together
- Define case-specific financing strategies and mechanisms
- Assess EU funding opportunities and financing sources for investment opportunities inside and outside Europe

European Raw Materials Alliance - ERMA

ERMA Impact to date

- >800 partners, strong policy drive
- REE Action Plan released 2021
- Input into CRMA
- Materials for Energy Storage and Conversion Action Plan released 2023

- >100 investment cases screened
 - > 40 can be de-risked and advanced to bankable stage
 - > 20 billion € investment value



EU Raw Materials Strategic Partnerships

CRMA Board

- Coordination of existing Strategic Partnerships within international Forums and Initiatives
- Consideration and advance of new Strategic Partnerships

→ diversify the EU's supply of critical raw materials and enhance cooperation with third countries

Strategic Partnerships signed & discussed (Oct 2023)





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Thank you!

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