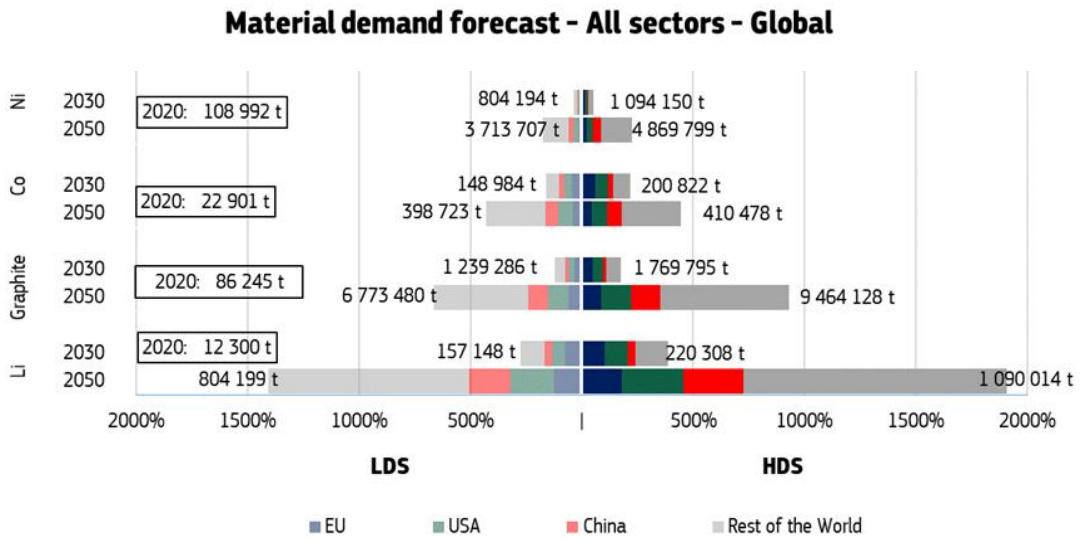
European CRM Act

Proposal for a Regulation - establishing a framework for ensuring a secure and sustainable supply of critical 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



Demand forecasts aggregated for selected raw materials (2023 Foresight Report)

Lithium demand for batteries in the EU is expected to **grow by 12 times by 2030** and **by 21 times by 2050.**

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

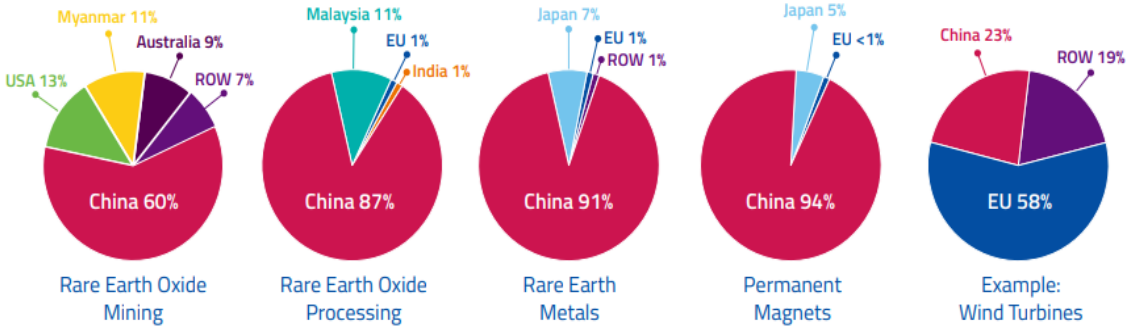


Fig. 3: From rare earths mining to wind turbine manufacturing: estimated market shares in 2019. Sources: Team analysis and Roskill 2018; Adamas Intelligence 2019; Peteves 2017; Carrara et al. 2020; IEA 2021; USGS 2021.

Source: European Raw Materials Alliance (ERMA)

European Commission

Others are taking actions

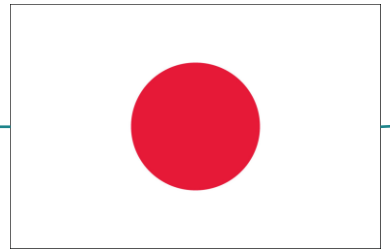
Expanding its monopoly:
- controls 70% of Congo's cobalt;
- acquires stakes in AUS or USA companies

Developing refining capacity:
- controls 73% of global lithium cell manufacturing

Increasing its consumption:
- consumes 50-60% of world's metals
- plans additional 750 GW of wind and solar PV installed capacity by 2025

Restraining supply:
- All rare earths covered by 2022 export control list;
- 65 000 tonnes of rare earths exported in 2005 35 500 tonnes in 2020;

JOGMEC:
- monitoring
- stockpiling
- investing (Lynas rare earths refinery)
- supply contracts



Economic Security Promotion Act
- Ensuring Stable Supply of critical items

National Defence Stockpile

Defence Production Act
- 120 million USD to build rare earths refinery by Lynas

Section 232 investigations
- neodymium magnets,
- vanadium, titanium

Critical minerals-related funding
- (Infrastructure Investment and Jobs Act)

Inflation Reduction Act

European Commission

European Critical Raw Materials Act

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

- 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

I. 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 (twin transition, 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 **15%** of the EU's SRM consumption

Towards more diversification of supply

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

II. Strengthening the value chain

Strategic Projects

Across the whole SRM value chain: extraction – processing - recycling

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

Benefits

- **Priority Status** in national and EU law: for administrative and judicial procedures
- **One-stop-shop approach**
- **Permitting** - **Legal time-frames**
  - Extraction: 24 months
  - Processing & Recycling: 12 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

One-stop-shops

Member States should designate one national authority to facilitate and coordinate the permit-granting process

Exploration

MS to implement national exploration programmes targeting CRM

European Commission

III. Risk monitoring and mitigation

- Monitor **supply risks** of CRM
- **Stress tests** by the Commission with Member States
- Alerts to MS/relevant authorities in case of risk
- **Company risk preparedness**
- **Strategic stockpiling**: information gathering and coordination
- Voluntary joint purchasing

IV. Ensuring the free movement of CRMs with a high level of environmental protection

CIRCULARITY

National measures on CRMs circularity

Maximising potential from (closed) **extractive waste facilities**

Preparing the ground for massive recycling 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

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.

Materials assessed

Industrial and construction minerals	Aggregates, Baryte, Bentonite, Borates, Diatomite, Feldspar, Fluorspar, Gypsum, Kaolin clay, Limestone, Magnesite, Natural graphite, Perlite, Phosphate rock, Phosphorus, Potash, Silica sand, Sulphur, Talc
Iron and ferro-alloy metals	Chromium, Cobalt, Iron, Manganese, Molybdenum, Nickel, Niobium, Tantalum, Titanium, Tungsten, Vanadium
Precious metals	Gold, Silver and Platinum Group Metals (Iridium, Palladium, Platinum, Rhodium, Ruthenium)
Rare earths	Cerium, Dysprosium, Erbium, Europium, Gadolinium, Holmium, Lanthanum, Lutetium, Neodymium, Praseodymium, Samarium, Terbium, Thulium, Ytterbium, Yttrium + Scandium
Other non-ferrous metals	Aluminium, Antimony, Arsenic, Beryllium, Bismuth, Cadmium, Copper, Gallium, Germanium, Hafnium, Indium, Lead, Lithium, Magnesium, Rhenium, Selenium, Silicon metal, Strontium, Tellurium, Tin, Zinc, Zirconium
Bio and other materials	Natural cork, Natural Rubber, Natural Teak wood, Sapele wood, Coking coal, Hydrogen and Helium; Roundwood, Neon, Krypton, Xenon

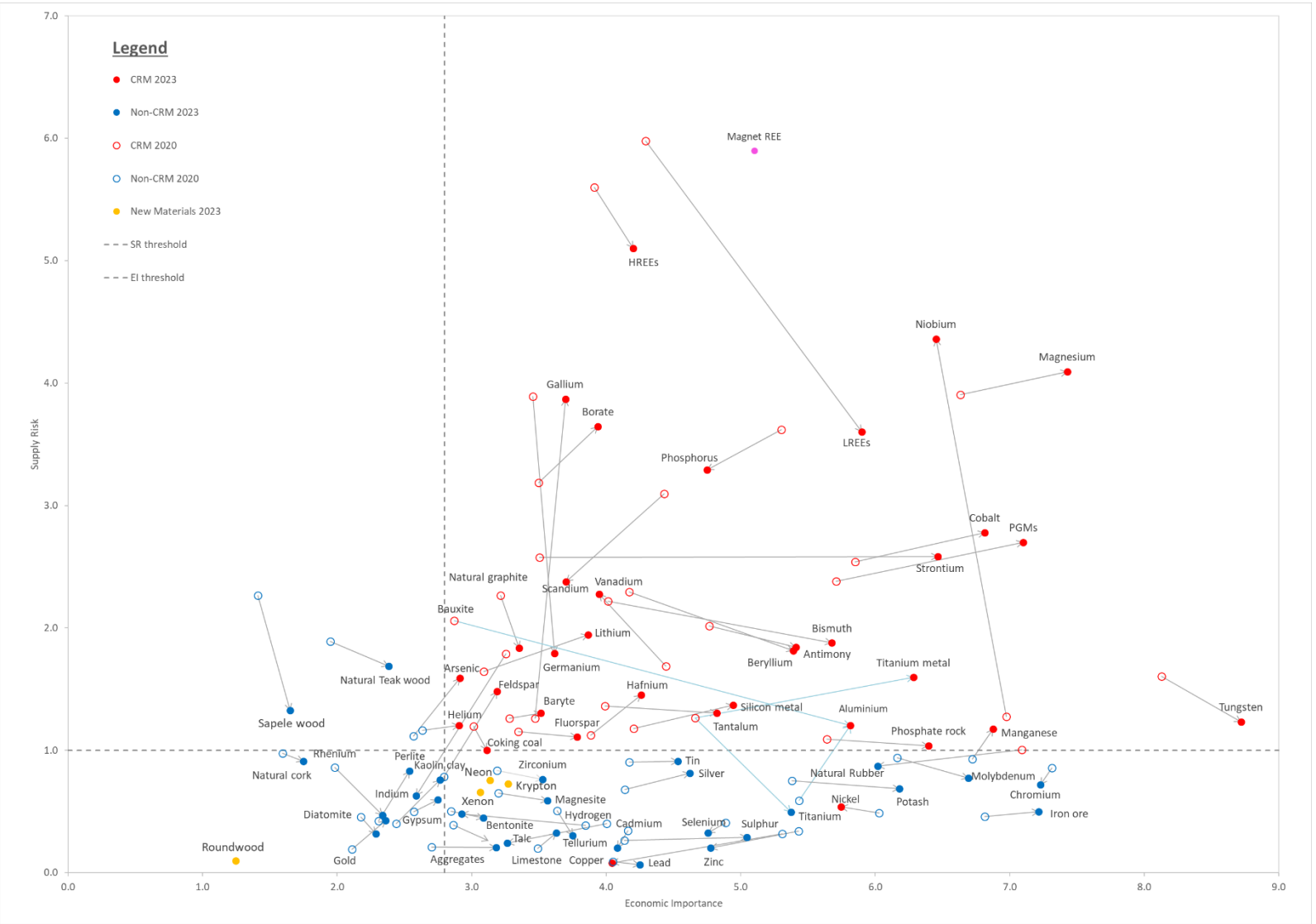
European Commission

2023 Critical Raw Materials

including Strategic Raw Materials (in *italics*), new CRM in **bold**, ex-CRM ~~struck out~~			
Antimony	Coking Coal	*Lithium*	Phosphorus
Arsenic	**Feldspar**	*Light Rare Earth Elements*	Scandium
Baryte	Fluorspar	*Magnesium*	*Silicon Metal*
Bauxite	*Gallium*	***Manganese***	Strontium
Beryllium	*Germanium*	*Natural Graphite*	Tantalum
Bismuth	Hafnium	Niobium	*Titanium Metal*
Boron	**Helium**	*Platinum Group Metals*	*Tungsten*
Cobalt	*Heavy Rare Earth Elements*	Phosphate Rock	Vanadium
~~Natural Rubber~~	~~Indium~~	***Copper****	***Nickel****

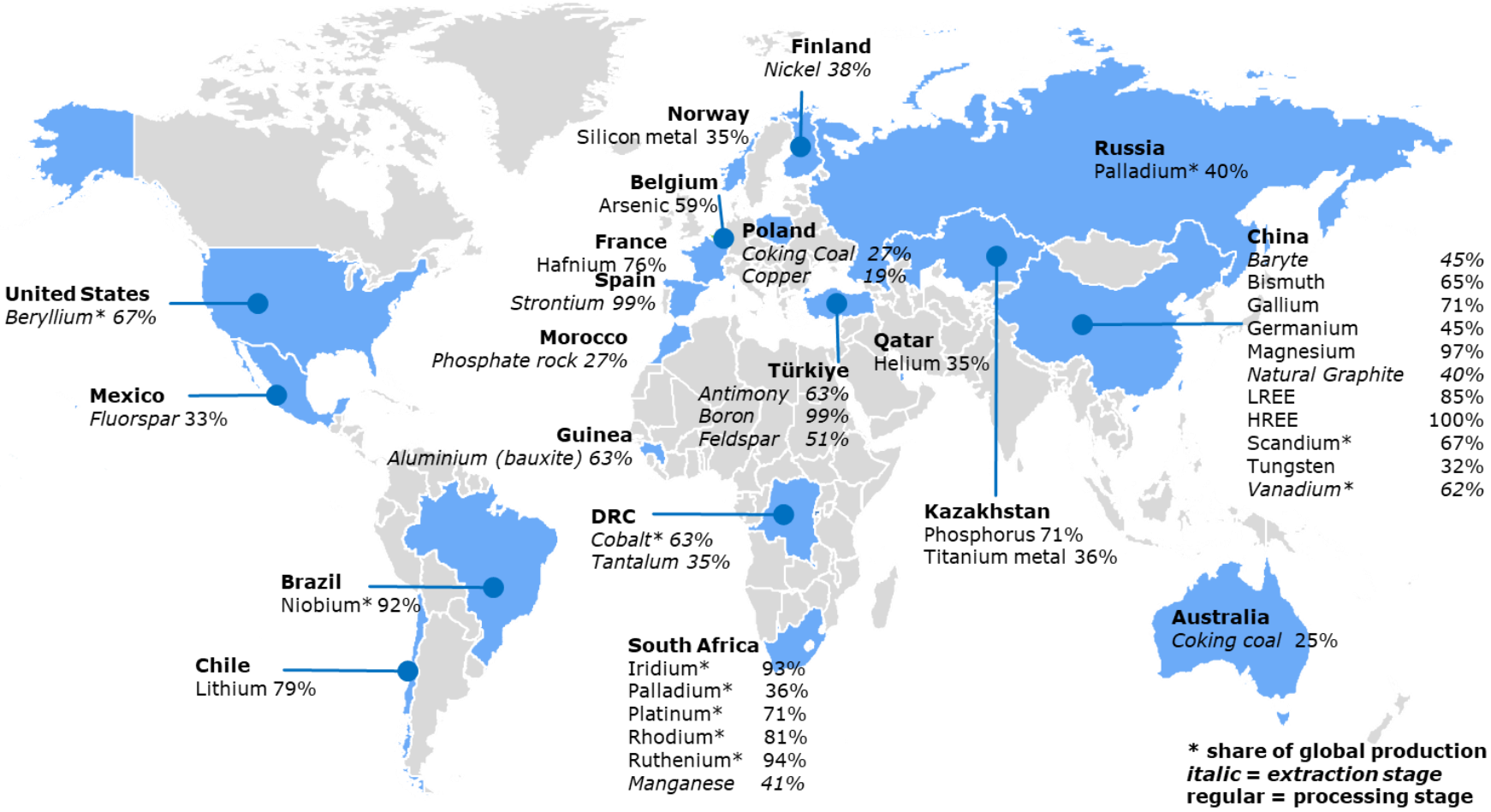
European Commission

2023 Critical Raw Materials



European Commission

Structural dependencies in the EU supply of CRMs



Source: "European Commission, Study on the EU's list of Critical Raw Materials – Final Report (2023)"

European Commission

The CRM Communication

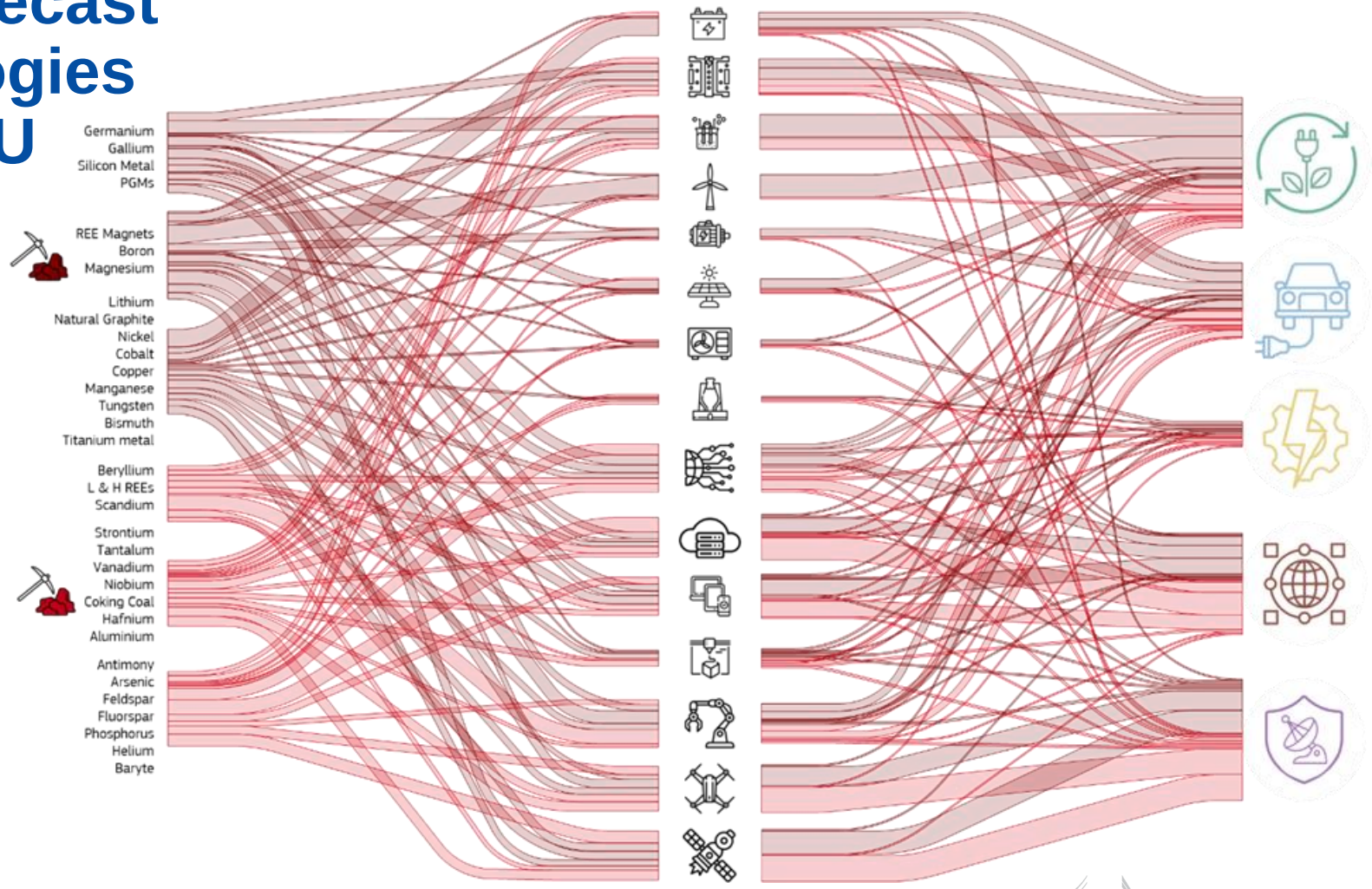
- Complementing the CRMA with a focus on external policies
- **Guiding principles**:
  - Effort at EU level needs to be stepped up,
  - In a more coherent, integrated and coordinated manner, with concerted internal and external action,
  - With special attention paid to sustainability and the needs of developed countries (“mutually beneficial partnerships”)
- **Three pillars**:

1. Developing the critical raw materials value chain in the EU

2. Boosting the diversification of supply and partnering in a mutually beneficial manner in support of global production

3. Promoting sustainability and circularity across the value chain

Supply chain analysis and material demand forecast in strategic technologies and sectors in the EU – A foresight study

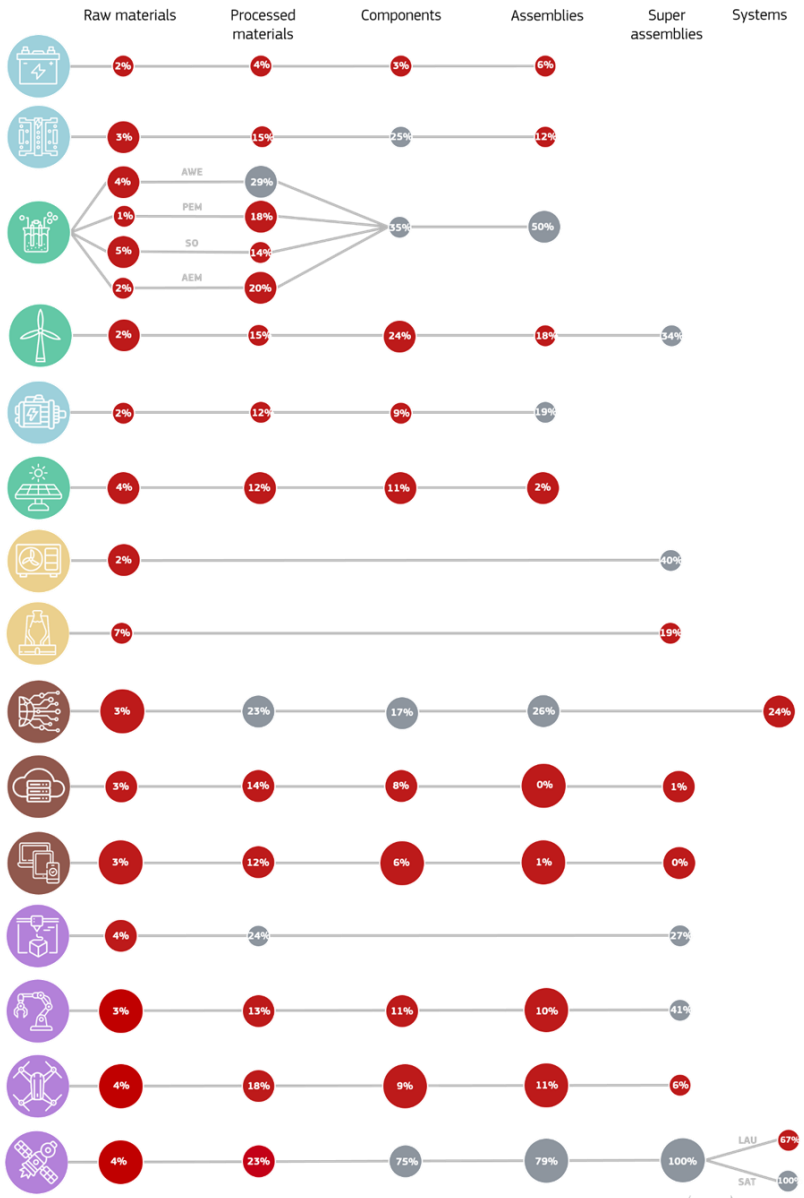


European Commission

Bottleneck Analysis

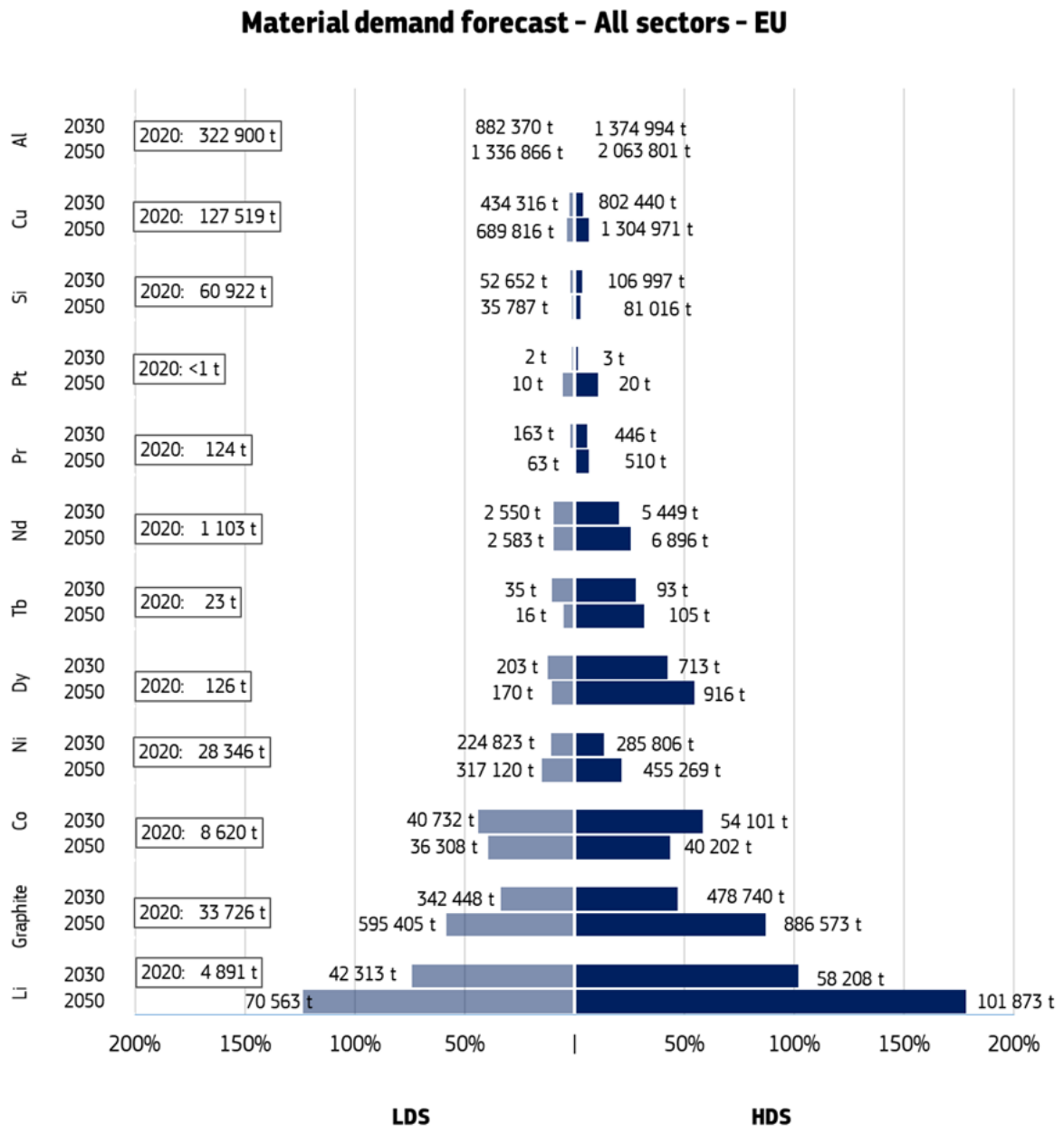
Technologies: Li-Ion Batteries, Fuel Cells, Electrolysers, Wind turbines, Electric Motors, PV panels, Heat pumps, H2-DRI, Data Transmission Networks, Servers and Storage, Mobile Devices, 3D printing, Robotics, Drones, Satellites and Rocket Launchers.

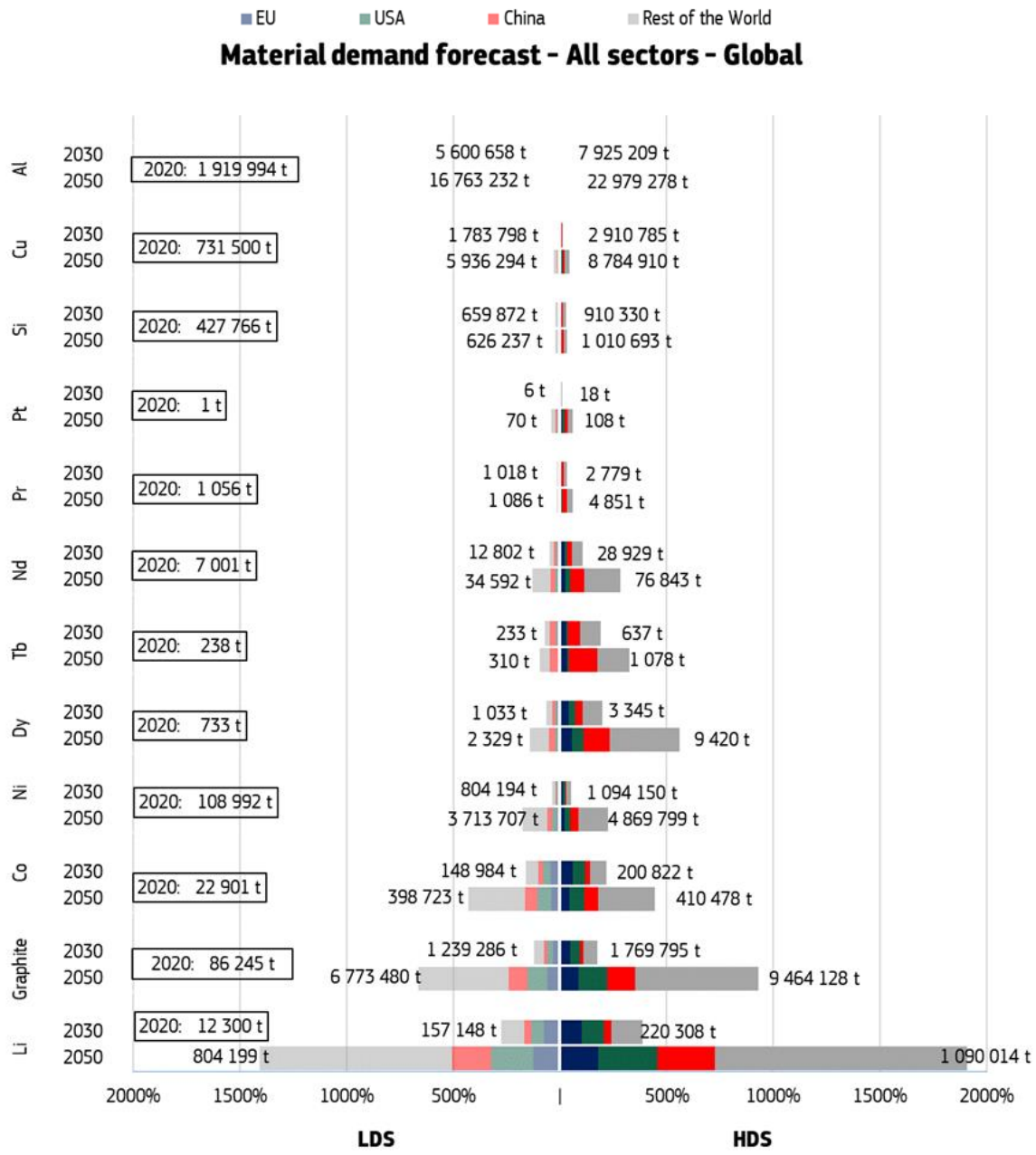
- **EU shows significant vulnerability along the supply chains examined**: only 17 bubbles are grey out of a total of 70.
- **The raw materials step is systematically critical for all technologies**. Here, the EU share in global production is never higher than 7%.
- The EU is **reasonably strong in the manufacturing** of the final technologies.



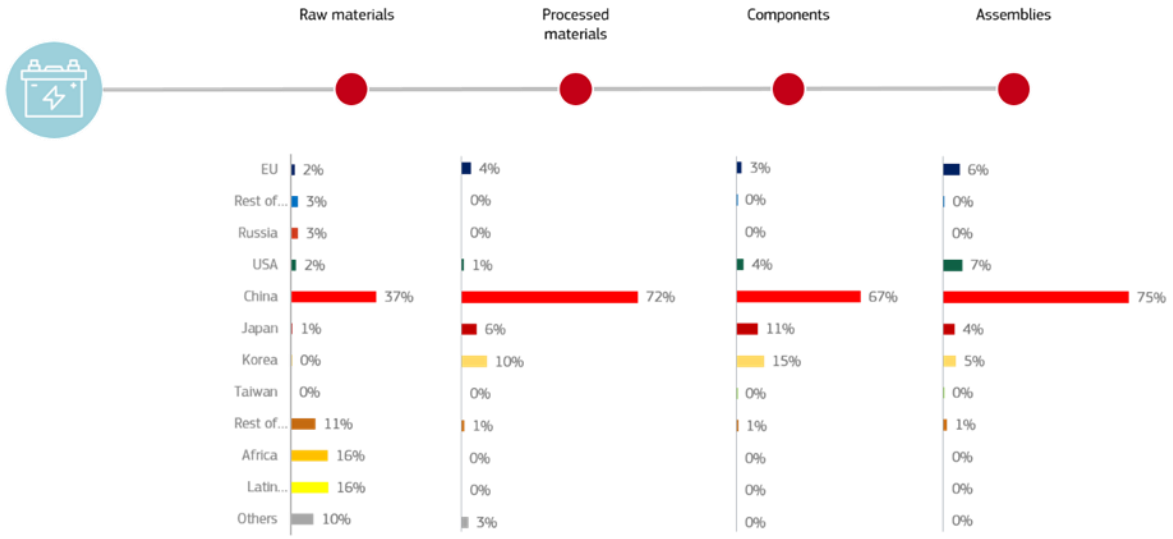
European Commission

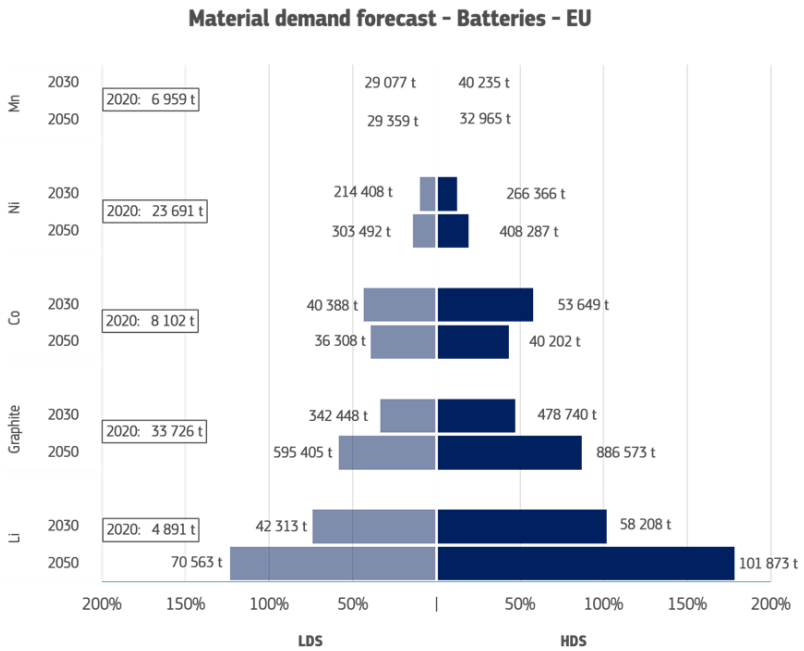
Raw Materials Foresight

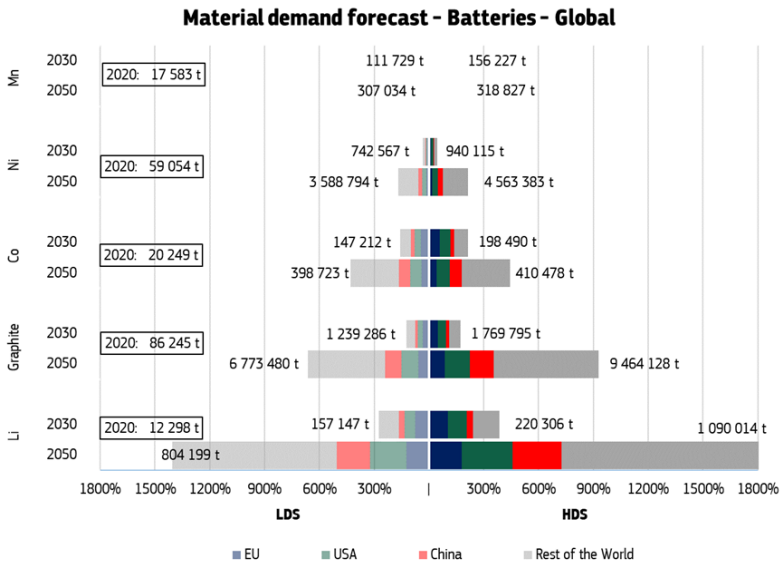




Technology Specific

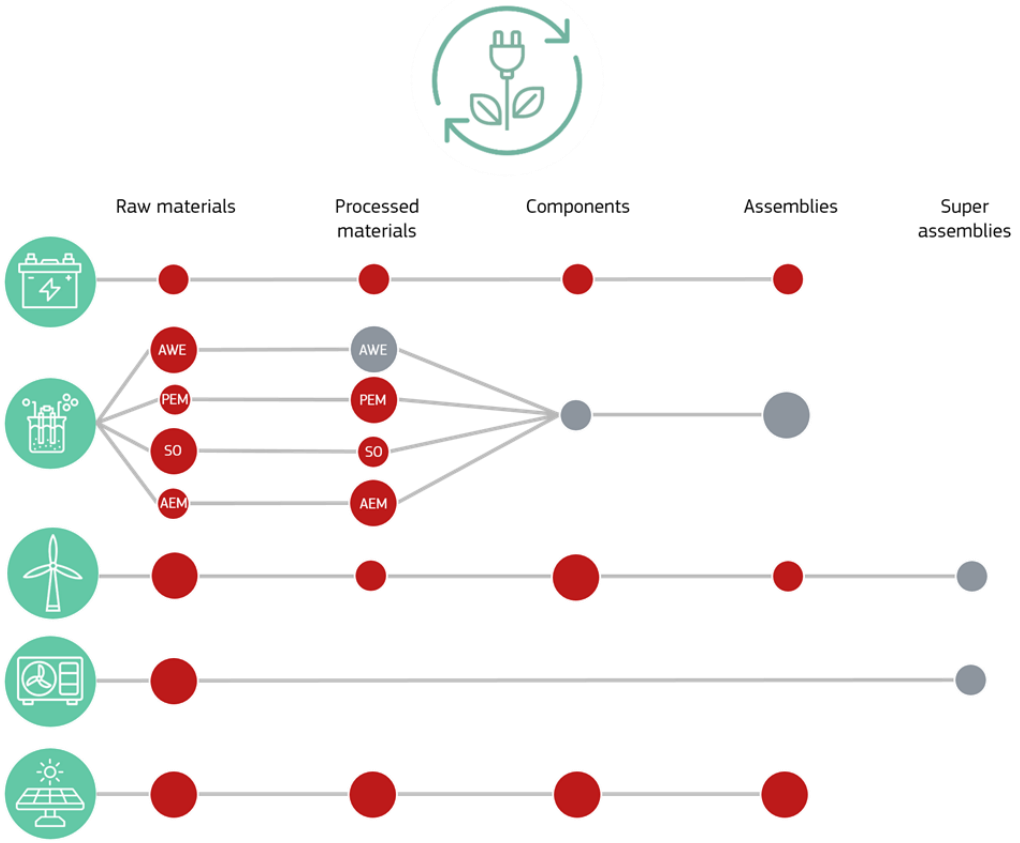


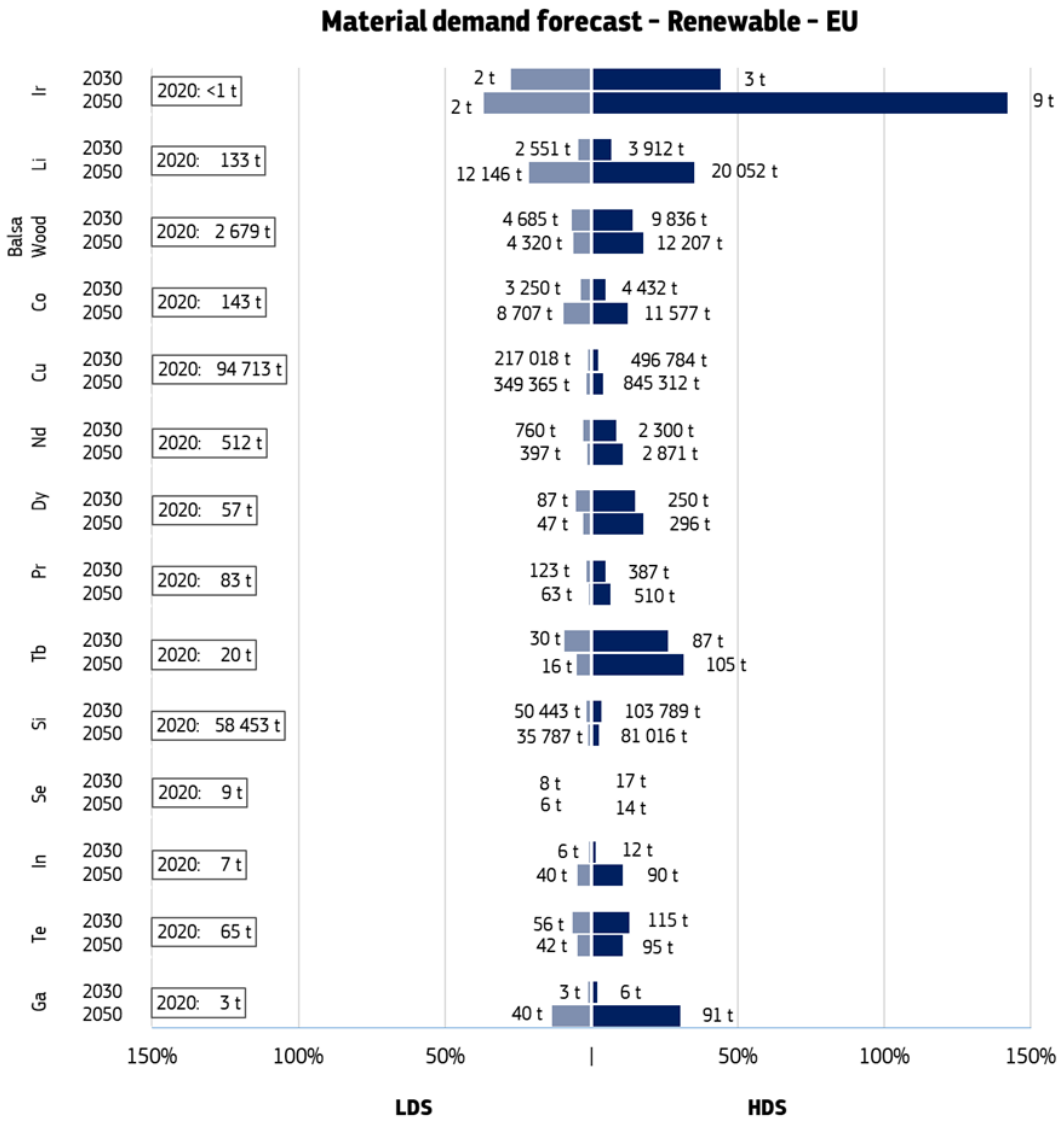




European Commission

For Sectors





European Commission

Links

- CRM Act Press Release
- CRM Act (Draft Regulation)
- CRM Act (Communication)
- 2023 Foresight Study
- 2023 Study on CRMs for the EU
- CRM Factsheets