Raw Materials Information System (RMIS):

the knowledge broker for raw materials security of supply, circularity and sustainability

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Joint Research Centre – European Commission

09/11/2023 Ecomondo, Rimini

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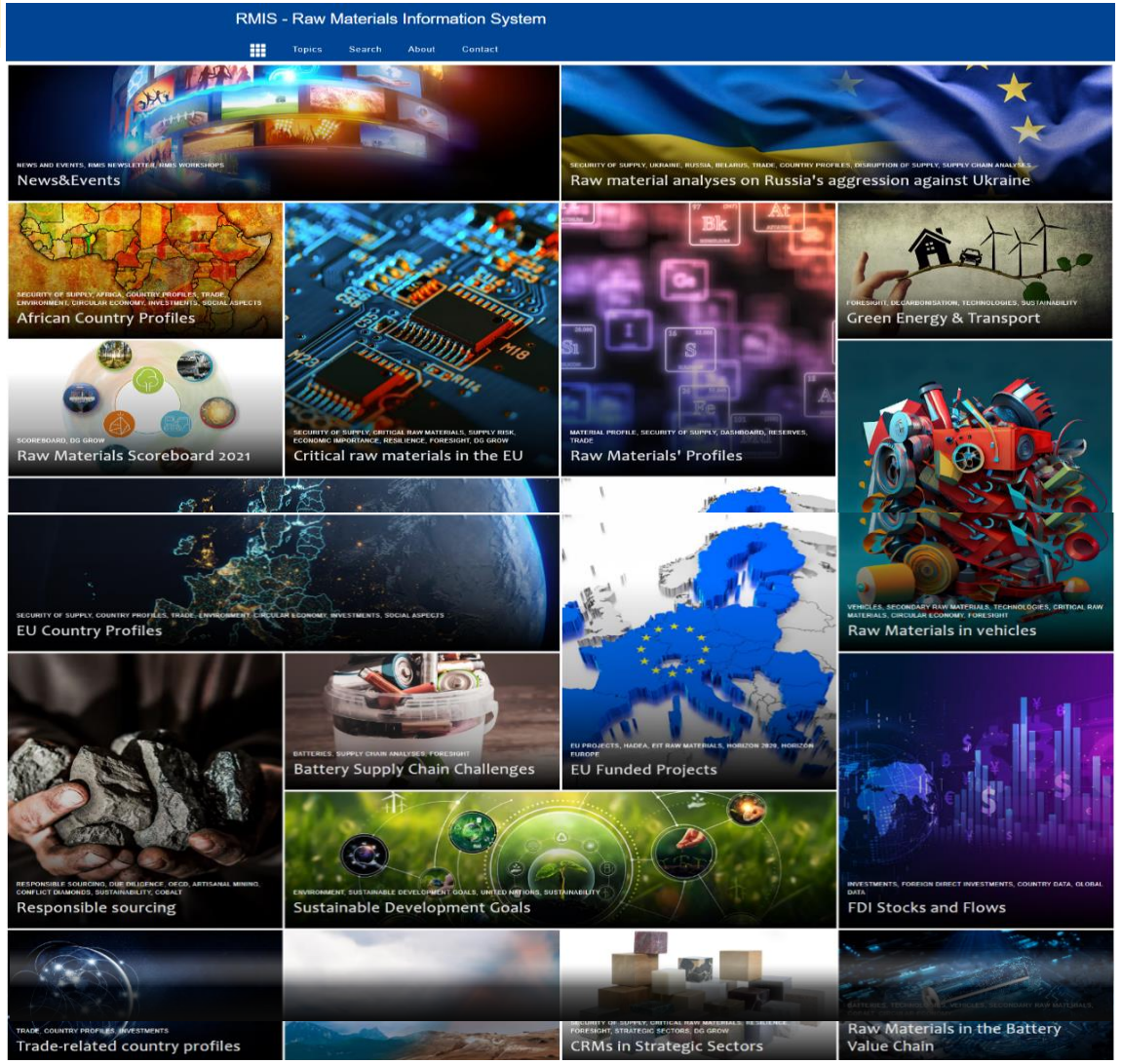
RMIS: overview, scope, facts & figures



- The **Raw Materials Information System (RMIS)** is the EC's knowledge platform on non-energy, non-food raw materials from primary to secondary sources (mostly **metals & minerals**)
- Facilitates availability, coherence and quality of knowledge required at EU level
- Supports EC policy, interactions with MSs, community, EU-funded projects, EU & international organisations
- **RMIS 3.0** version released March 2023 in parallel to Critical Raw Materials (CRM) Act

https://rmis.jrc.ec.europa.eu/

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RMIS 3.0 content & topics

KNOWLEDGE PRODUCTION → KNOWLEDGE INTEGRATION AND DISSEMINATION → POLICY SUPPORT

- **RM governance, policy & legislation**
- **Foresight** analyses / security of supply
- **Strategic autonomy**, criticality, resilience
- Critical, Strategic and **Advanced materials**
- **Circular Economy** – secondary raw materials
- **Economics & trade**
- RMs **monitoring indica**tors
- Flows in **strategic/priority value chains**
- **Material flow/system analyses**
- Environmental sustainability via **environmental footprint**
- **Social sustainability** / Responsible sourcing / SDGs

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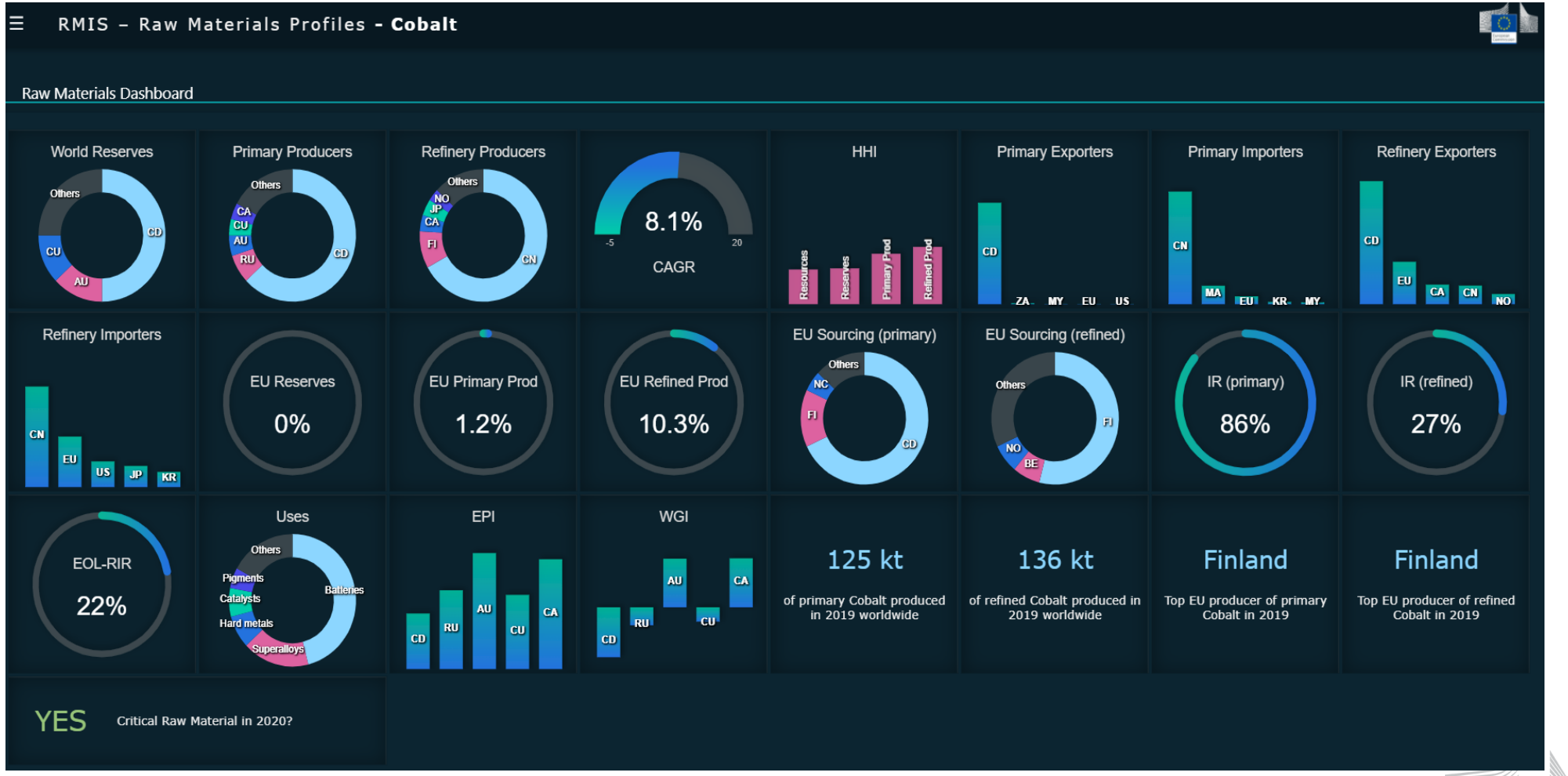
https://rmis.jrc.ec.europa.eu/

Raw Materials' Profiles: Dashboard

Covers 100 materials, complements EC Critical Raw Materials assessment



https://rmis.jrc.ec.europa.eu/

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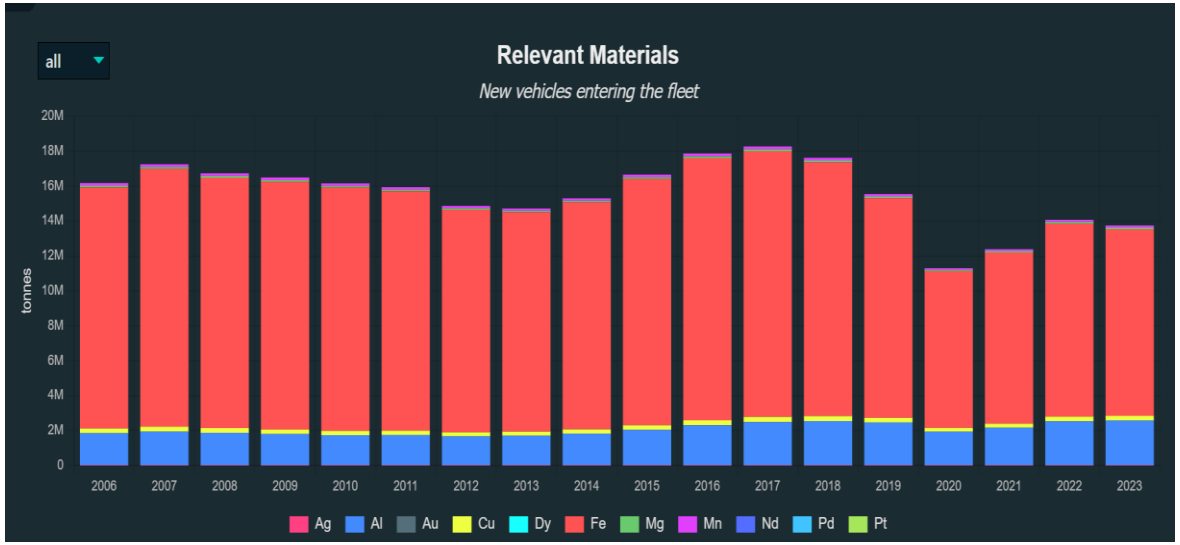
Critical & Strategic Raw Materials – De-risking and Sustainability Knowledge

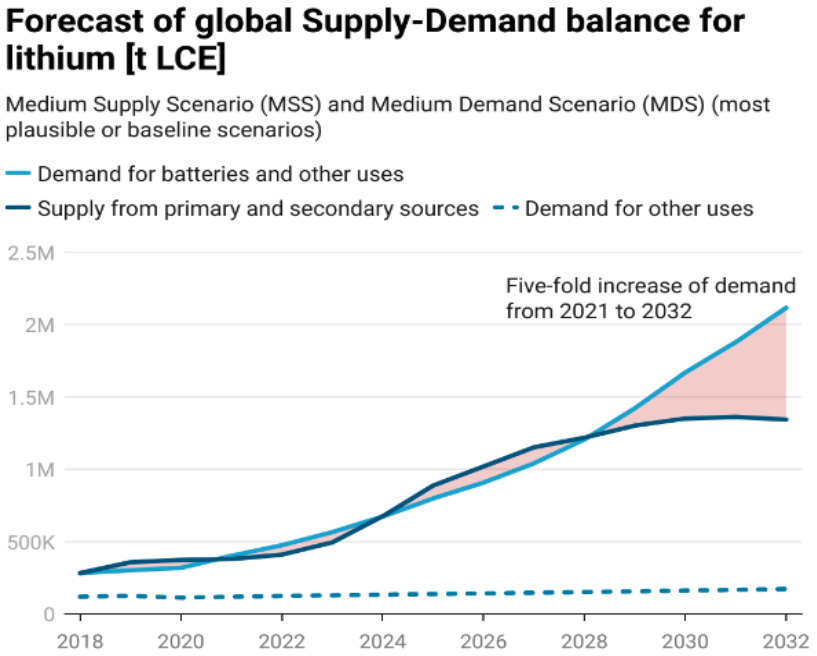
Value chain modelling/analyses

current/future of value chain demands, ownership, locations, extraction/processing options, circularity potentials



Focused assessment e.g. Ukraine, China, Gallium, Germanium, …

future supply vs demand, in-depth risk and diversification analyses



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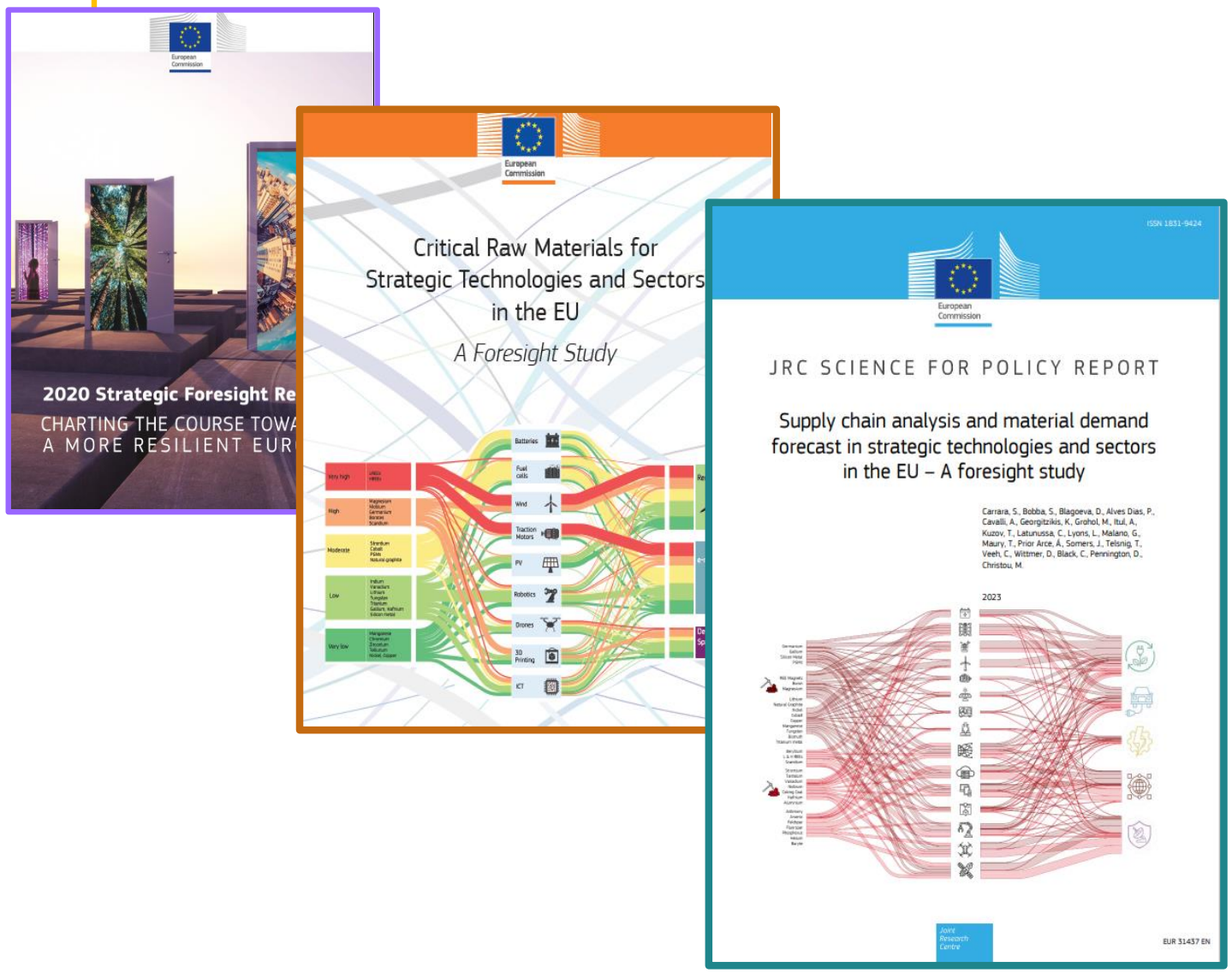
Foresight analyses for strategic technologies & sectors



Systematic and detailed analysis of the **complete value chains**, from raw and processed materials to components, assemblies and systems, **for 15 key technologies across five strategic sectors:**

- *renewable energy,*
- *electromobility,*
- *industrial*
- *digital*
- *aerospace-defence*

https://publications.jrc.ec.europa.eu/repository/handle/JRC132889

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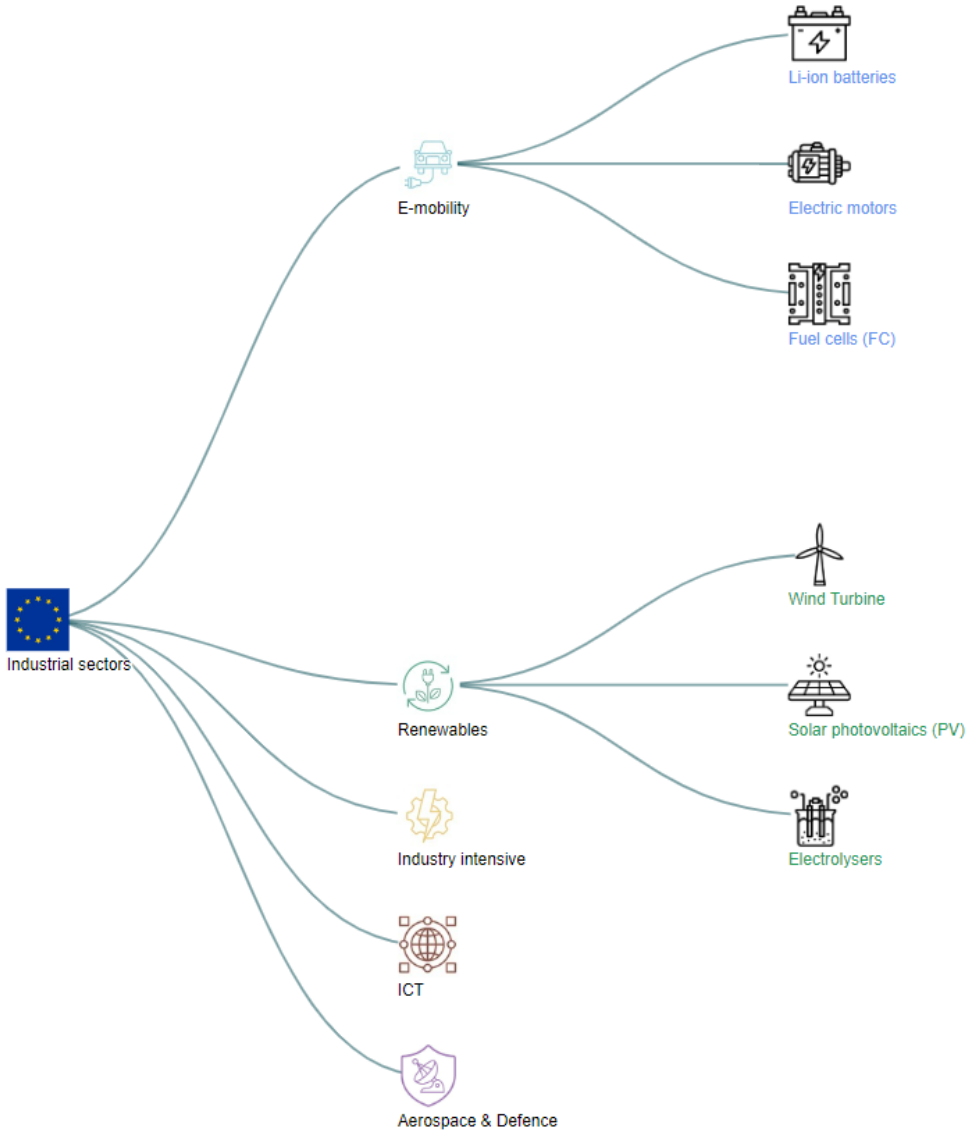
Technologies & Sectors Profiles



Analysis on the **supply chain structure** of key technologies for strategic sectors:

- relevant materials, components and assemblies;
- potential bottlenecks;
- supply risk;
- future demand;
- policy-relevant scenarios or market trends.

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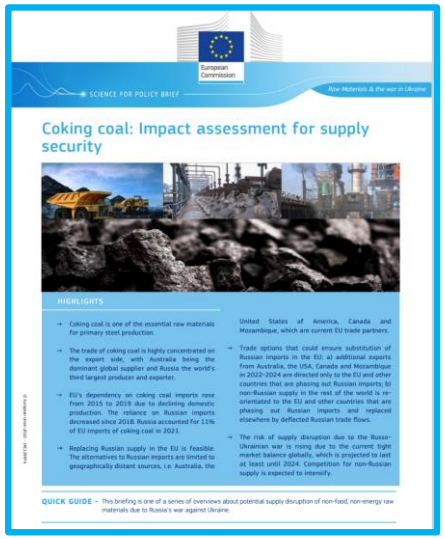
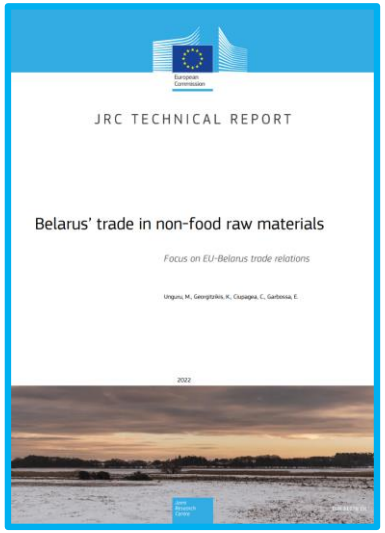
RMIS provides prompt responses to emerging knowledge needs : e.g., (foresight) Analysis of EU's supply risk

Material-specific briefs for potash, titanium, coking coal, rare gases, nickel, PGMs,…



Trade-related country fiches for Ukraine, Russia, Belarus, Kazakhstan, China…



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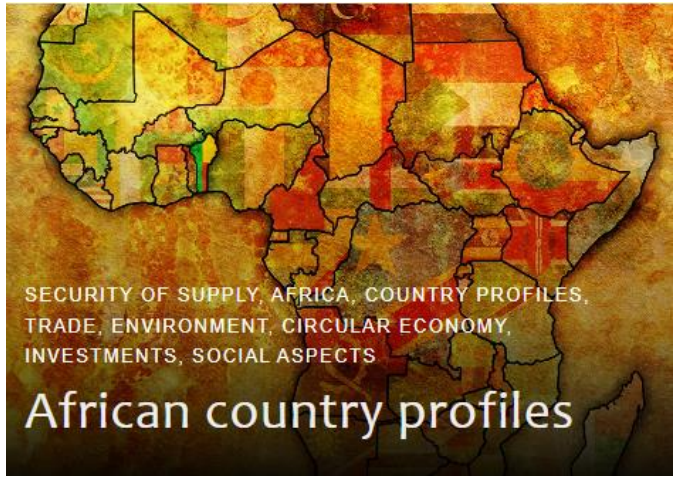
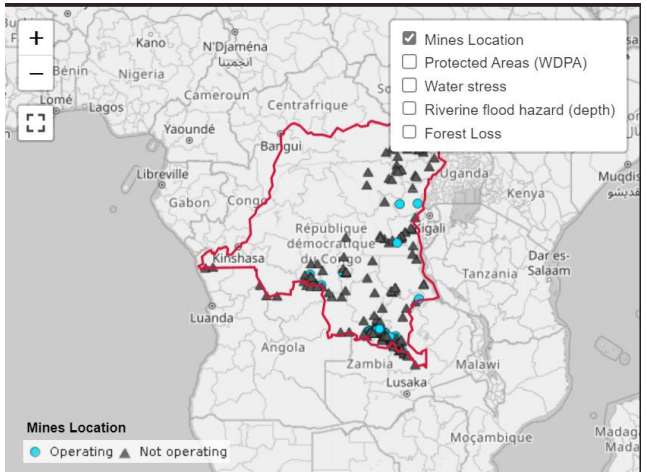
RMIS Country Profiles EU and Extra EU (e.g. for Africa)

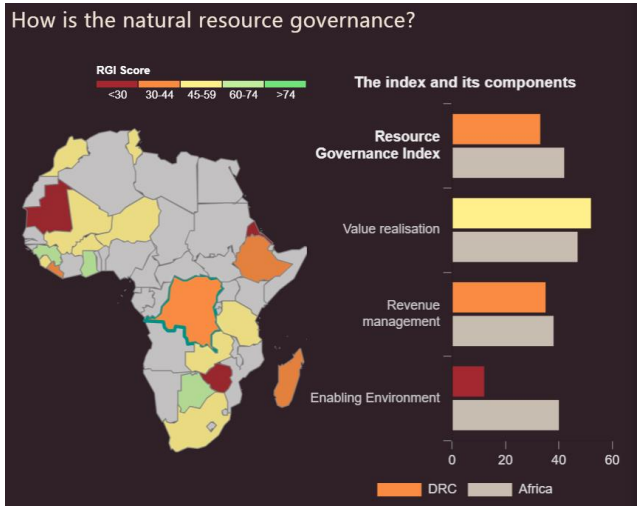


- Profiles available in RMIS for 45 out of 54 African countries
- Provide concise quantitative summaries for non-food, non-energy RMs
- Complement and explicitly link to the overarching JRC's **Africa Knowledge Platform** (AKP)
- Includes 20+ indicators related to trade, investments, environmental & social sustainability, circular economy & resource efficiency, governance.
- (*forthcoming new profiles for **LAC** countries…*)



Country Raw Materials Profiles

current/future mines locations, ownership, potentials, sustainability performance, trade, …



Competitiveness,

governance, disruption impacts, jobs, environmental footprint, due diligence, …

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Environmental footprint of raw materials

- Life cycle assessment based studies of critical and strategic raw materials.
- Methodological development in support to assessing the environmental profile of CRMs
- Product and organisation environmental footprint as in EC recommendations of 2021
- Addressing all levels: corporate, plant/facilities, products, materials, individual chemicals

[European Platform on LCA | EPLCA (europa.eu)]

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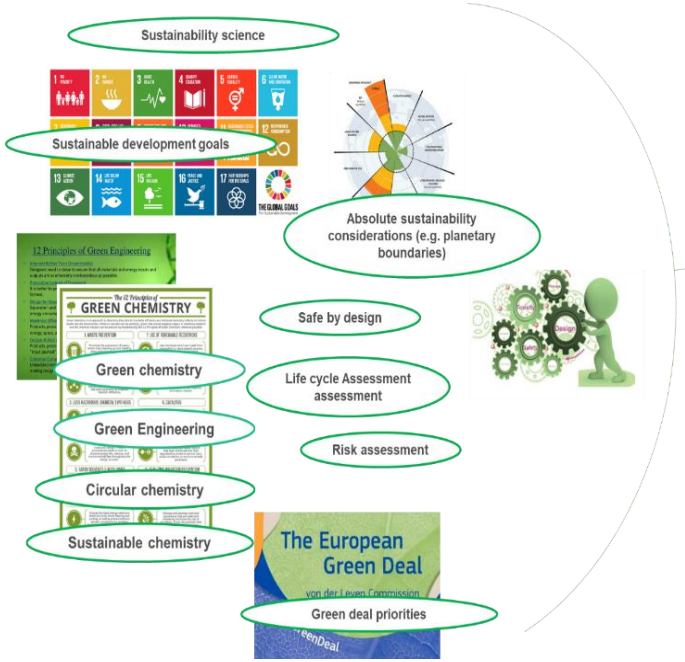
Boosting circularity…

- From to the technological assessment of the **circularity potential of existing products** containing CRMs …to the **definition of criteria for the ecodesign of future products** to enhance circularity

https://data.europa.eu/doi/10.2760/207541

…and unveiling substitution opportunity

- Advanced materials related initiatives and funds
- Safe and sustainable by design chemicals and materials
- Essential to avoid regrettable substitutions, namely promoting safer alternatives which have a better environmental profile along their entire life cycle



Safe and sustainable by design


EUROPEAN COMMISSION

COMMISSION RECOMMENDATION

of 8.12.2022

establishing a European assessment framework for 'safe and sustainable by design' chemicals and materials

EN EN

Caldeira, et al. (2022). ***Safe and Sustainable chemicals by design chemicals and materials - Framework for the definition of criteria and evaluation procedure for chemicals and materials.*** *https://doi.org/10.2760/487955*

[Chemicals and advanced materials (europa.eu)]

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Thank you

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