



German Mineral
Resources Agency

Germany's Raw Materials Strategy and the EU's Critical Raw Materials Act

**Webinar:
Critical Minerals for the Energy Transition in Japan and Germany**

Dr. Sven-Uwe Schulz

25.10.2023

www.dera.bund.de
www.bgr.bund.de

Federal Institute
for Geosciences and
Natural Resources

Agenda



- Germany: Raw Materials Situation & Energy Transition Goals
- Germany's Raw Materials Strategy
- Europe: EU's Critical Raw Materials Act



Germany: Raw Materials Situation & Energy transition goals

Germany's Raw Materials Situation (2021)



Domestic production



- Lignite: 126.3 mn t (+17.6 %)
- Crude oil: 1.8 mn t (-4.7 %)
- Gas: 6.0 bn m³ (-0.1 %)
(natural, petroleum and mine)
- **Minerals: 620.0 mn t (-1.3 %)**
- Peat: 5.4 mn t (+2.9 %)

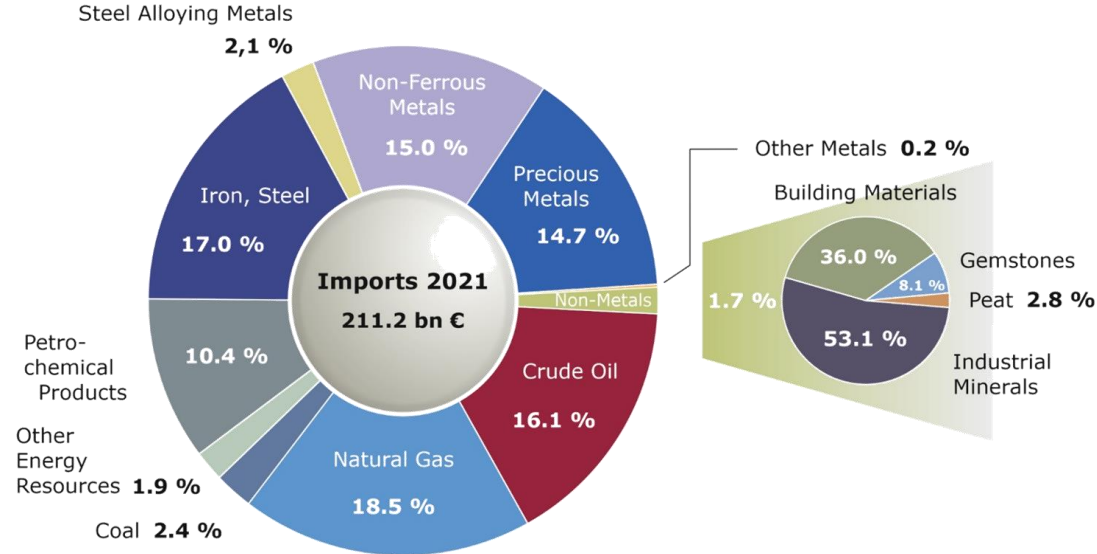
€

13.5 bn EUR (+17.1 %)

- Import dependence for metal ores and concentrates: 100 %, app. 50% from non-EU countries
- more than 90 % of non-metals from Europe
- Share of **recycled raw materials** at refined production in Germany:

53% Al, 45% Raw Steel, 38% Cu

Import dependence



→ Reliable supply is critical for competitiveness of Germany's industry

Energy Transition in Germany: Goals and Structure



Climate goals, nuclear phase-out (by 2022), coal phase-out (by 2038 at the latest), competitiveness, security of supply

Policy goals

To increase the share of renewable energy sources (RES) in overall energy consumption

To reduce primary energy consumption and increase energy efficiency

Core goals
"Strategy level"



Electricity
consumption using RES

Heat
using RES

RES in the transport
sector

To increase final energy productivity

To reduce electricity
consumption

To reduce final energy consumption for heat

To reduce final energy consumption in the transport
sector

Steering goals
"Steering level"

➔ Optimisation

Guiding criteria:
cost efficiency,
system integration,
synchronisation of RES
and grid capacity

Instrument mix

(acts, ordinances, regulations, funding programmes, etc.)

"Instrument level"



Germany: Energy Transition Targets & Expansion of Wind & PV



4 main transition targets

40 – 45 %

Share of renewables to be reached in power consumption by 2025



2022

Year when the remaining nuclear power plants are to shut down



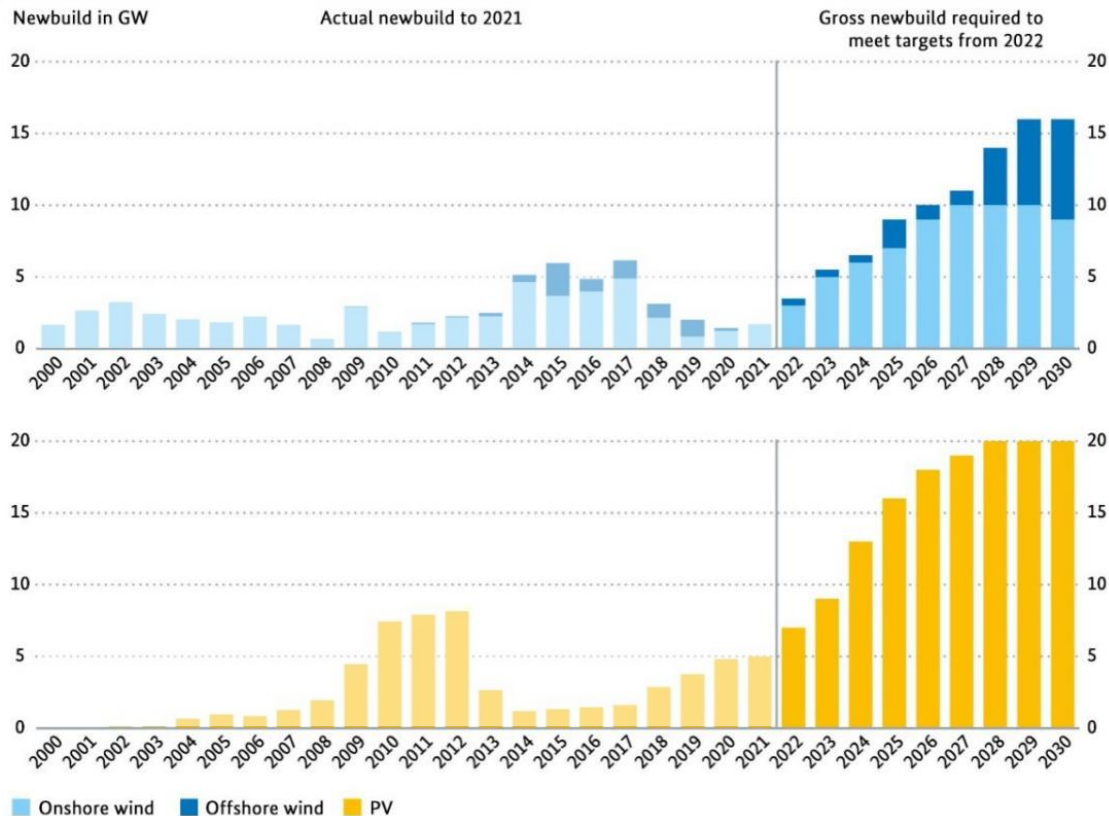
55 %

amount by which greenhouse gas emissions are to be reduced by 2030 (from 1990 levels)

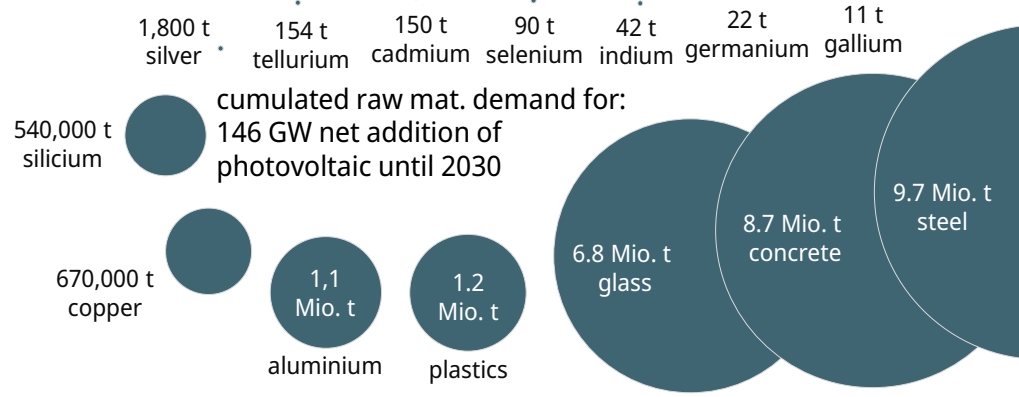
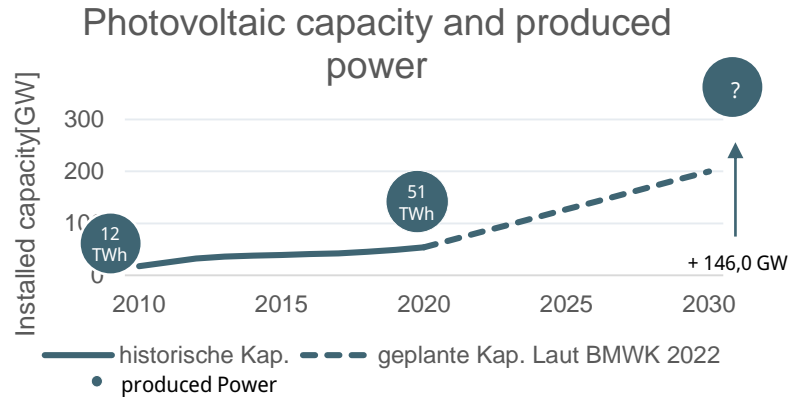
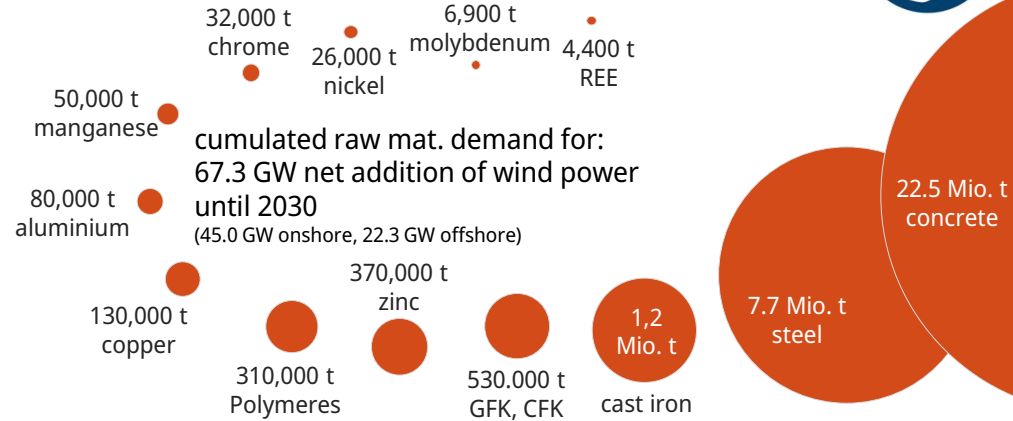
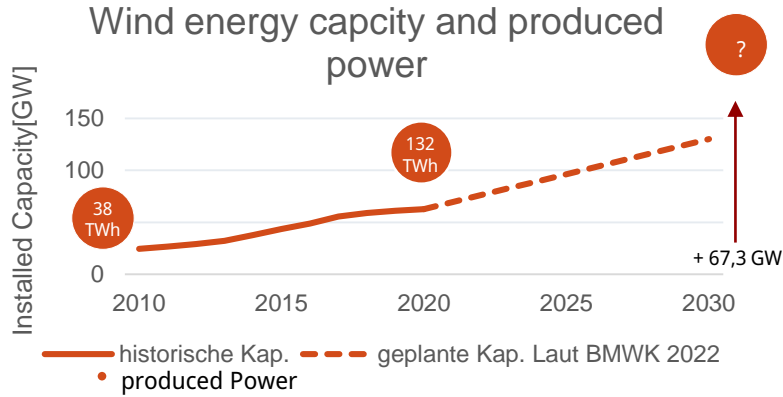


50 %

planned reduction in primary energy consumption by 2050 compared to 2008



Germany: Raw Materials for Energy Transition





Germany's

Raw Materials Strategy

Germany's Raw Materials Strategy



Die Bundesregierung

Rohstoffstrategie der Bundesregierung

Sicherung einer nachhaltigen Rohstoffversorgung Deutschlands mit nichtenergetischen mineralischen Rohstoffen

“In the view of the German government, **securing raw materials supply is still primarily the responsibility of companies.**

At the same time, however, numerous market developments in recent years make it clear that this market-based approach, which is based on free and fair access to raw materials, is often no longer sufficient”

secure and reliable raw materials supply of German industry

increase of **domestic production**

support of **import of raw materials**

increase of **recycling activities**

Germany's Raw Materials Strategy: Update 2020

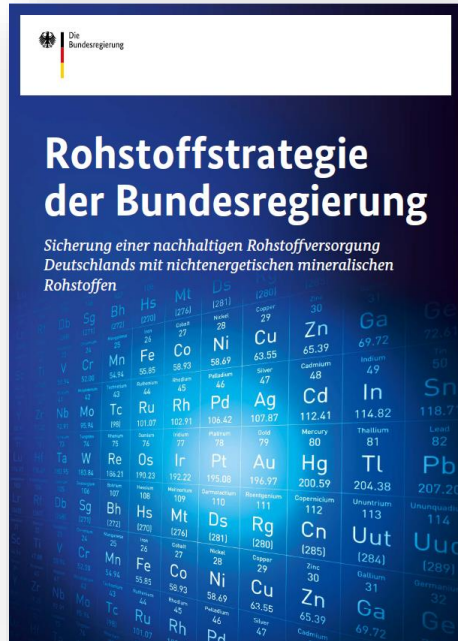


A responsible policy on raw materials to boost the **competitiveness** of German industry.

The Federal Government and the private sector agree that companies are themselves responsible for ensuring that they have the resources they need.

The German Government has been contributing to this effort by adopting a **Raw Materials Strategy**, under which it has taken **17 supportive measures**.

Germany's Raw Materials Strategy: Update 2020



1. **Responsible Raw Materials Production**
2. Saving and Publishing geological data
3. **Fostering primary raw materials production in the metals sector in Germany and in Europe**
4. Domestic raw materials production
5. Transformation of Mining Regions – sustainable closure of mine operations
6. Empowering of acceptance of domestic raw materials production
7. Creating a Level Playing Field in the raw materials production
8. Improve international raw materials politics
9. **Further Development of Foreign Trade Support, e.g. Untied Financial Loan Guarantees (UFK)**
10. Further Development of the DERA Raw Materials Monitoring

Germany's Raw Materials Strategy: Update 2020



- 11. Supporting sustainable mining economy in developing and emerging countries**
12. Strengthening circular economy and recycling by specifically R&D projects
13. Installation of a round table together with the industry to increase the utilization of raw materials from recycling
14. Improving resource and raw materials efficiency by technology transfer support programs, e.g. lightweight construction
15. Strengthening of Due Diligence Obligations in supply and value chains
- 16. Strengthening international cooperation by international dialogues on standards**
- 17. Cooperation with the European Commission on sustainable raw materials supply**

Framework Paper: ways towards a sustainable and resilient raw material supply



Federal Ministry
for Economic Affairs
and Climate Action

03.01.2023

Aims

- Supporting the companies to achieve a secure and sustainable supply of raw materials.
- Safeguarding the economic and strategic interests of Germany in the raw materials sector in the mid and long term.



Framework Paper: ways towards a sustainable and resilient raw material supply



Federal Ministry
for Economic Affairs
and Climate Action

03.01.2023

Measures

- ***Circular economy, resource efficiency and recycling***
 - Close integration of the strategies on circular economy and raw materials
 - Reduction of barriers regarding the use of recycled raw materials
 - Economic incentive systems, regulative minimum requirements and financing instruments to drive innovation in resource efficiency and recycling
 - Research and development to bring new processes promptly to the market
- ***Diversification of raw materials supply chains***
 - Monitoring of critical raw materials supply chains
 - Preservation and expansion of domestic raw materials production within the EU
 - Stockpiling of raw materials
 - Support of expansions of production and processing capacities overseas, amongst others via financial funds
 - Strategic direction of the international cooperation in the raw materials sector
- ***Ensuring a fair and sustainable market framework***
 - Support of the development of coherent ESG standards
 - International cooperation on consistent ESG standards
 - Support of the companies to evaluate ESG risks and to develop own ESG contributions



Europe:

EU's Critical Raw Materials Act

European Critical Raw Materials Act



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



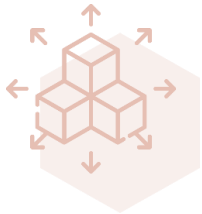
16.03.2023



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

Defining Critical & 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 & space)
- Forecast demand risks outstripping supply
- Difficulty to scale up production

2023 Benchmarks (to be reached 2030)

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 should come from a single third country.

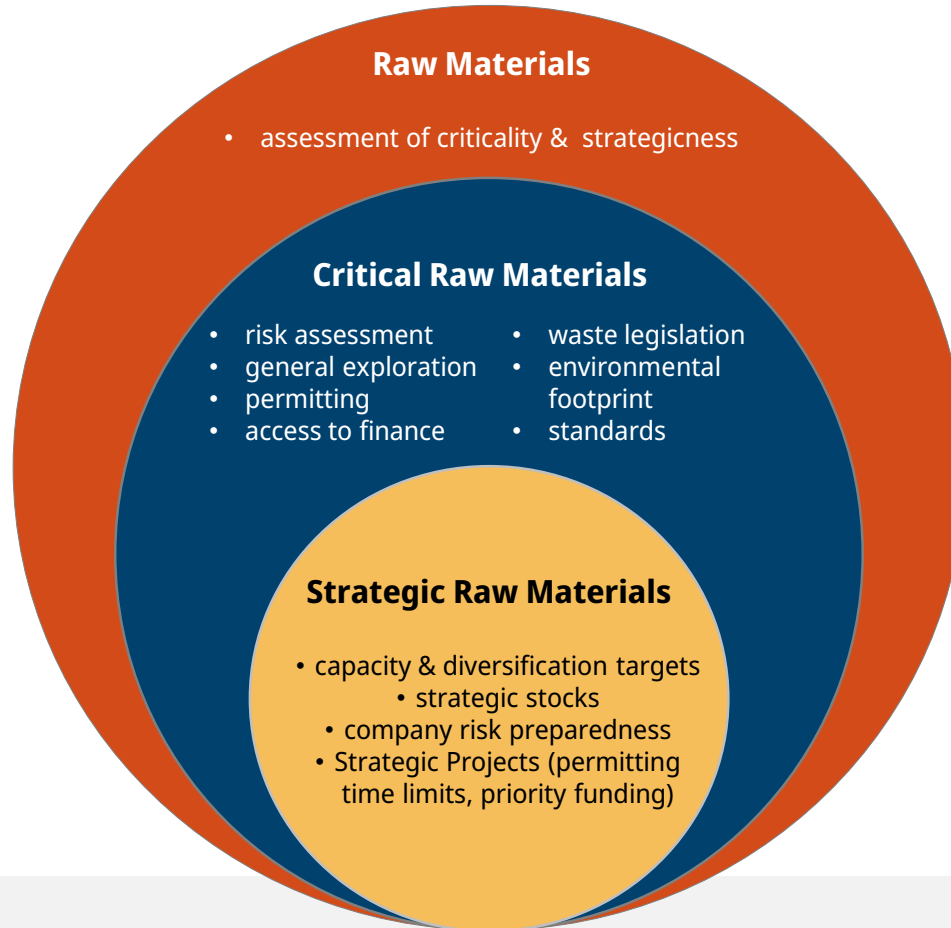


16.03.2023

Critical & Strategic Raw Materials



16.03.2023



Critical Raw Materials



34 raw materials defined as critical:

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

- by high Economic importance
- by high Supply risk



16.03.2023

- Antimony
- Arsenic
- Bauxite
- 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**
- **Natural Graphite**
- **Nickel – battery grade**
- Niobium
- Phosphate rock
- Phosphorus
- **Platinum Group Metals**
- Scandium
- **Silicon metal**
- Strontium
- Tantalum
- **Titanium metal**
- **Tungsten**
- Vanadium

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

Strategic Projects

Planned to be defined/identified along the whole value chain (SRM): mining – refining – processing - recycling



16.03.2023

Identified by the EC (advise by a CRM Board) based on:

- Contribution to security of supply
- Sustainability
- Technical feasibility
- Economical and social advantages for EU and 3rd countries

Advantages

- **Priority in national and EU law** (reg. administrative and legal processes)
- **One-Stop-Shop Approach**
- **Greatly shortened permitting time:**
 - Mining: 24 months
 - Processing and recycling: 12 months
- Instruction to realize and promptly transfer of EIA and permits without weakening of environmental protection and social standards
- **Conditions for implementing strategic projects:**
 - CRM Board offers coordination and advise to accelerate financing
 - Regulations to sign off-take agreements

Critical Raw Board

Advising role and support of the EC in realizing several measures of CRMA



16.03.2023

Composition



Strategic Partnerships

- Board discusses strategic partnerships of the EU with 3rd partner countries regarding raw materials and ensures coordination with other international platforms or initiatives
- Trade and investment protection agreements
- evtl. EU Export Credit Institution

Thank you, very much!

sven-uwe.schulz@bgr.de



German Mineral
Resources Agency

