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PAPER 2

The 2030 gap

Where the EU stands against its 2030 benchmarks for extraction, processing and recycling: what its own deposits could supply, what it spends on imports and what is still missing.

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PAPER 2

Main findings

01 From 2016 to 2020, EU capacity covered about 8% of EU consumption of strategic raw materials in extraction, 24% in processing and 12% in recycling, against 2030 benchmarks of 10%, 40% and 25%.

02 Five strategic raw materials exceeded the 65% single-country benchmark in the Court's review: boron, processed lithium, magnesium, gallium and rare earths.

03 Known European deposits plus recycling could in theory cover more than half of EU demand for 14 of the 35 materials by about 2040. The gap is processing and permits more than geology.

04 The Commission has selected 106 Strategic Projects. Its estimates of their expected capital investment, summed by Hercinia, come to €49.1bn. The Commission says they could meet the 2030 extraction benchmark for lithium, nickel, rare earths, magnesium and tungsten, if they are built.

05 The EU paid €55.3bn in 2025 for imports of critical raw materials and potash from outside the EU, and €37.6bn for lithium-ion batteries, solar cells and modules, and permanent magnets.

06 No EU stockpile is confirmed as running, and Germany has no state stockpile. Japan stocks 34 rare metals, generally for 60 days of use.

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INTRODUCTION

The Critical Raw Materials Act sets four benchmarks for 2030: how much of its strategic raw materials the EU should mine, process and recycle itself, and how much it may take from any single country. This paper shows where Europe stands against them, what its own deposits and projects could add, and what it spends on imports and public support.

Data as of 27 October 2026. All figures come from public sources, mainly the Act itself, the European Court of Auditors, the European Commission and Eurostat. Each carries a numbered source, listed in Appendix B. Appendix A gives the data on Europe's own supply.

01 Four benchmarks for 2030

The Critical Raw Materials Act, Regulation (EU) 2024/1252, entered into force on 23 May 2024. It sets four benchmarks for 2030. Taken together for all strategic raw materials, EU capacity should approach or reach 10% of annual EU consumption in extraction, 40% in processing and 25% in recycling. For each strategic raw material, no single third country should supply more than 65% of annual EU consumption, at any relevant stage of processing.[1]

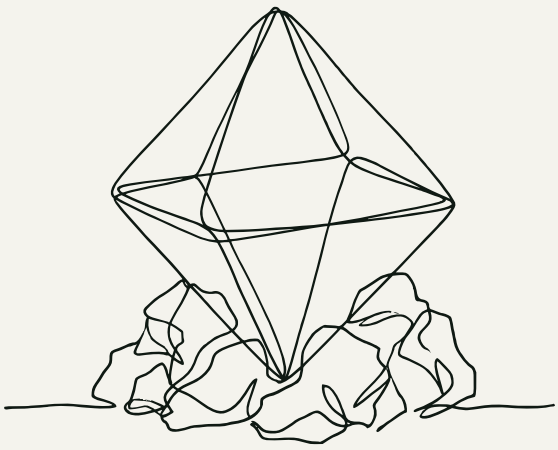
The European Court of Auditors calls the benchmarks non-binding. It estimated average EU capacity between 2016 and 2020 at about 8% of EU consumption of strategic raw materials in extraction, 24% in processing and 12% in recycling.[2]

IN FIGURES

40%

the 2030 benchmark for processing; from 2016 to 2020 EU capacity covered about 24%

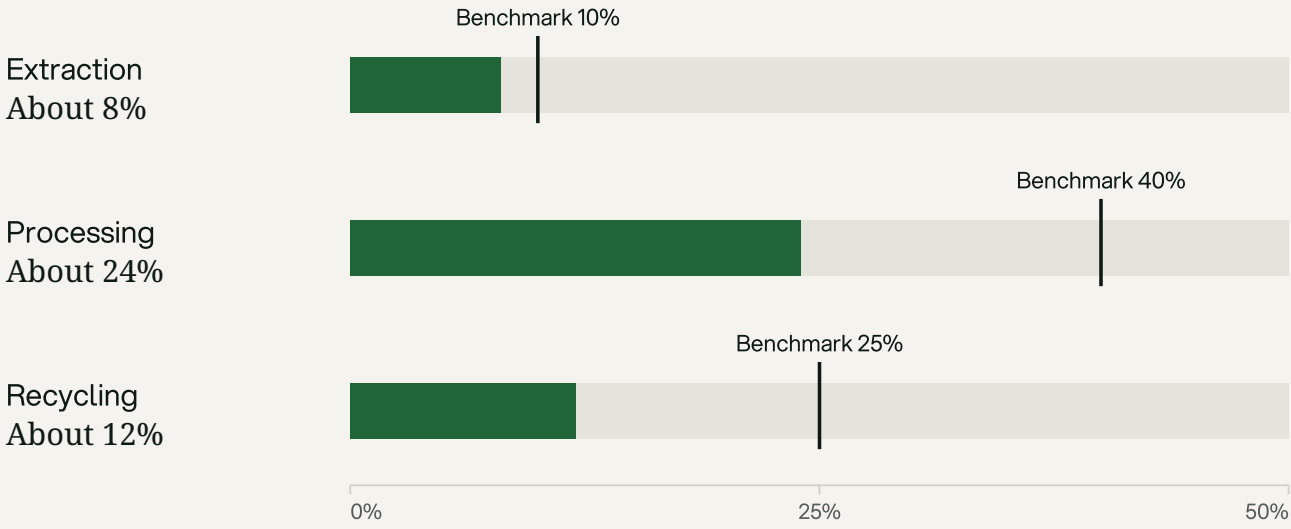




THE 2030 GAP

Europe is behind on all three capacity benchmarks

EU capacity as a share of EU consumption, averages 2016 to 2020, against the Critical Raw Materials Act benchmarks for 2030.



Source: European Court of Auditors, Special report 04/2026, Critical raw materials for the energy transition, capacity 2016 to 2020

The averages hide wide gaps. The EU mines almost no natural graphite or rare earths. According to the Court, a new mine in the EU typically takes 10 to 15 years to become operational, and can take up to 20.[2]

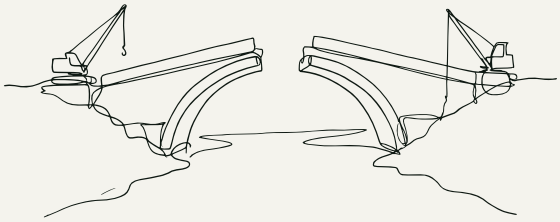
02 The 65% benchmark

Five strategic raw materials exceeded the 65% benchmark in the Court's review, on Commission data from January 2025: boron at the extraction stage (Turkey 99%), and at the processing stage lithium (Chile 79%), magnesium (China 97%), gallium (China 71%) and the rare earths used in permanent magnets (China, 69% to 77% by element).[2]

IN FIGURES

5

strategic raw materials above the 65% single-country benchmark in the Court's review



03 What Europe's own ground could give

Hercinia's assessment, from the cited sources, is that known European deposits plus recycling could in theory cover more than half of EU demand for 14 of the 35 materials by about 2040, between 10% and half for 15, and under 10% for 6.[3]

EUROPE'S OWN SUPPLY

What Europe could supply itself by about 2040

Known European deposits plus recycling, as a share of EU demand. Hercinia's assessment from the cited sources; resources are not reserves.

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More than 50% of EU demand

- Aluminium and bauxite
- Arsenic
- Boron
- Copper
- Feldspar
- Gallium
- Hafnium
- Lithium
- Magnesium
- Potash
- Scandium
- Silicon metal
- Strontium
- Tungsten

15 of 35

10% to 50%

- Antimony
- Baryte
- Bismuth
- Cobalt
- Coking coal
- Fluorspar
- Heavy rare earths
- Light rare earths
- Manganese
- Nickel
- Phosphate rock
- Platinum group metals
- Tantalum
- Titanium metal
- Vanadium

6 of 35

Under 10%

- Beryllium
- Germanium
- Helium
- Natural graphite
- Niobium
- Phosphorus

Source: SCRREEN factsheets and USGS 2026 (EU demand, known deposits); European Court of Auditors, Special report 04/2026, Figure 5 (EU capacity 2016 to 2020)

Processing and permitting often limit supply more than geology does. Known lithium resources in Germany, Czechia, France, Spain, Portugal, Austria and Finland equal more than 2,000 years of the EU's 2019 demand, yet EU refining capacity between 2016 and 2020 was zero.[2,3] The EU has no titanium sponge plant, no primary magnesium production since 2001 and no white phosphorus production since 2012.[3]

EUROPE'S OWN SUPPLY

What Europe's own ground could give

MATERIAL	EU CAPACITY 2016 TO 2020: EXTRACTION / PROCESSING / RECYCLING	PROJECTS DUE BY 2030	POTENTIAL BY ABOUT 2040
Lithium	8% / 0% / 0%	26% of 2030 demand	More than 50%
Tungsten	20% / 19% / 42%	27% of 2030 demand	More than 50%
Light rare earths	0% / 0% / 1%	24% of 2030 demand	10% to 50%
Heavy rare earths	0% / 0% / 1%	70% of 2030 demand	10% to 50%
Magnesium	n/a / 0% / 13%	17% of 2030 demand	More than 50%
Natural graphite	1% / 0% / 3%	6% of 2030 demand	Under 10%
Titanium metal	0% / 0% / 1%	No public figure	10% to 50%

Capacity: European Court of Auditors, Special report 04/2026, Critical raw materials for the energy transition, or SCRREEN. Pipeline: Hercinia sum of public project capacity. Potential: Hercinia's assessment. Resources are not reserves.

04 The project pipeline

The Commission has selected 106 Strategic Projects in three lists: 47 in the EU in March 2025, 13 outside the EU in June 2025 and 46 in the EU in October 2026, of which 19 are recycling projects. The Commission put the expected capital investment at €22.5bn, €5.5bn and €21.1bn for the three lists, which Hercinia adds up to €49.1bn.[4]

The Commission says the 106 projects could fully meet the 2030 extraction benchmark for lithium, nickel, rare earths, magnesium and tungsten, and the processing benchmark for lithium and rare earths. They could cover 89% of the processing benchmark for cobalt, 57% for tungsten and 51% for magnesium, and fully meet the recycling benchmark for lithium, cobalt and rare earths. This is projected capacity, if the projects are built.[4] In September 2026 Reuters reported an August letter to the Commission saying that 23 of the 60 projects selected in 2025 faced immediate jeopardy; the letter did not name them.[5]

IN FIGURES

106

Strategic Projects selected by the Commission

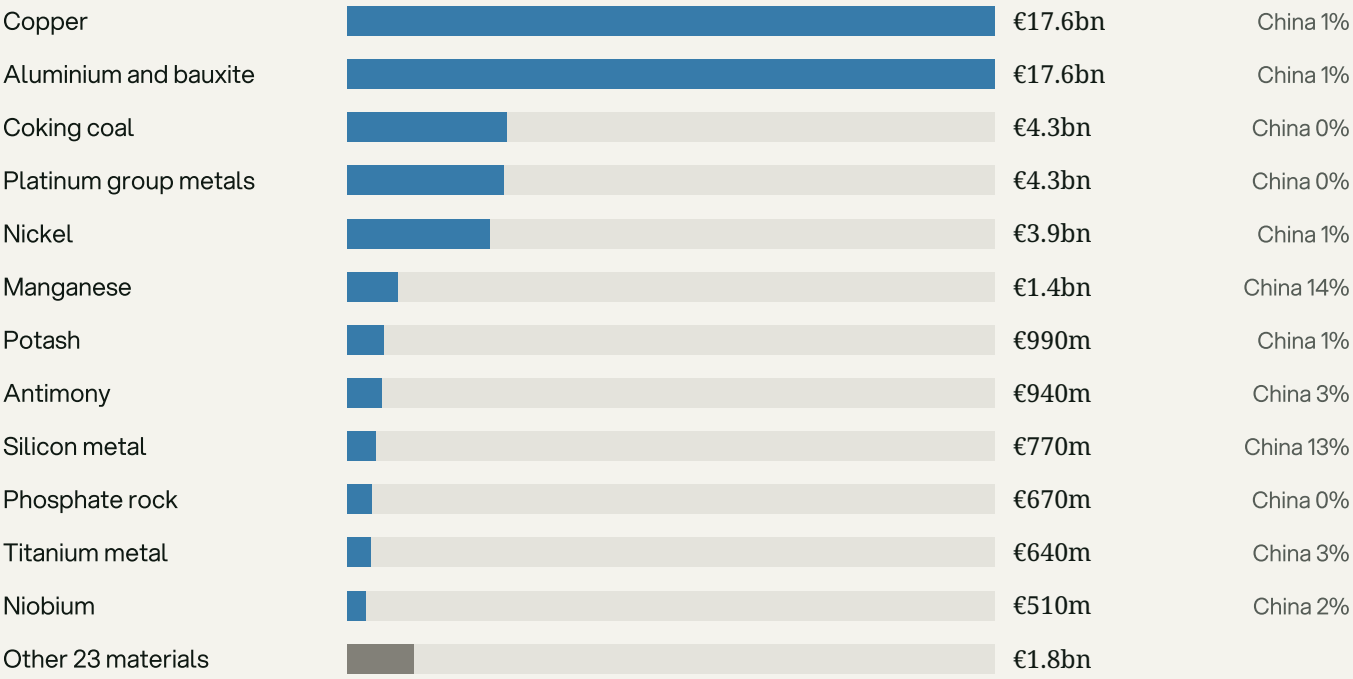
05 What Europe spends

The EU paid about €55.3bn in 2025 for imports from outside the EU of the 34 critical raw materials and potash, in raw and refined forms, up from €54.2bn in 2024. Copper and aluminium make up 63.5% of the bill.[6]

WHAT EUROPE SPENDS

The EU spent €55.3bn on critical raw material imports in 2025

Extra-EU imports by the EU-27 in raw and refined forms, €bn. Copper and aluminium make up 63.5%. The note gives China's share of each bill.



Source: Eurostat Comext DS-045409, extra-EU imports 2025, summed by Hercinia. Eurostat is not responsible for this use of its data.

China supplied 2.6% of this bill by value. Europe's dependence on China lies in minor metals of small value, where in 2025 China supplied 93% of EU magnesium imports by value and 77% of gallium imports, and in processed products.[6]

IN FIGURES

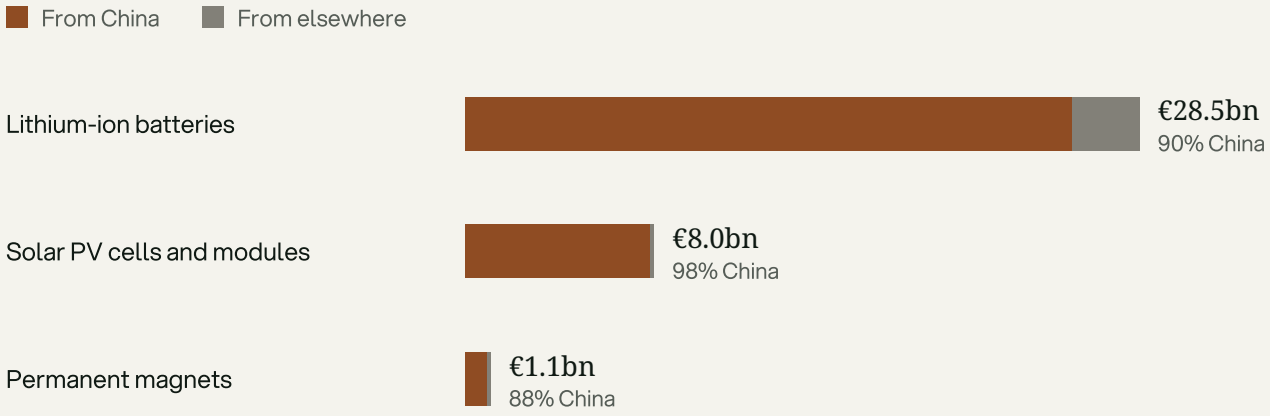
€55.3bn

paid by the EU in 2025 for critical raw materials and potash from outside the EU

WHAT EUROPE SPENDS

€37.6bn for three products, 91.7% of it from China

EU imports in 2025, €bn, by origin. Batteries already fitted in imported vehicles and devices are not counted.



Source: Eurostat Comext DS-045409, extra-EU imports 2025, summed by Hercinia. Eurostat is not responsible for this use of its data.

06 Public money

Public money committed in Europe is a fraction of these import bills. The EU's RESourceEU plan of December 2025 aims to mobilise €3bn within 12 months. The EIB expected about €2bn of financing for critical raw materials in 2025, and the Commission expects InvestEU to mobilise about €2bn in 2026 and 2027. In October 2026 the European Parliament voted for a €2bn Critical Raw Materials Fund in the 2028 to 2034 budget, a position it must still negotiate with member states.[7,8]

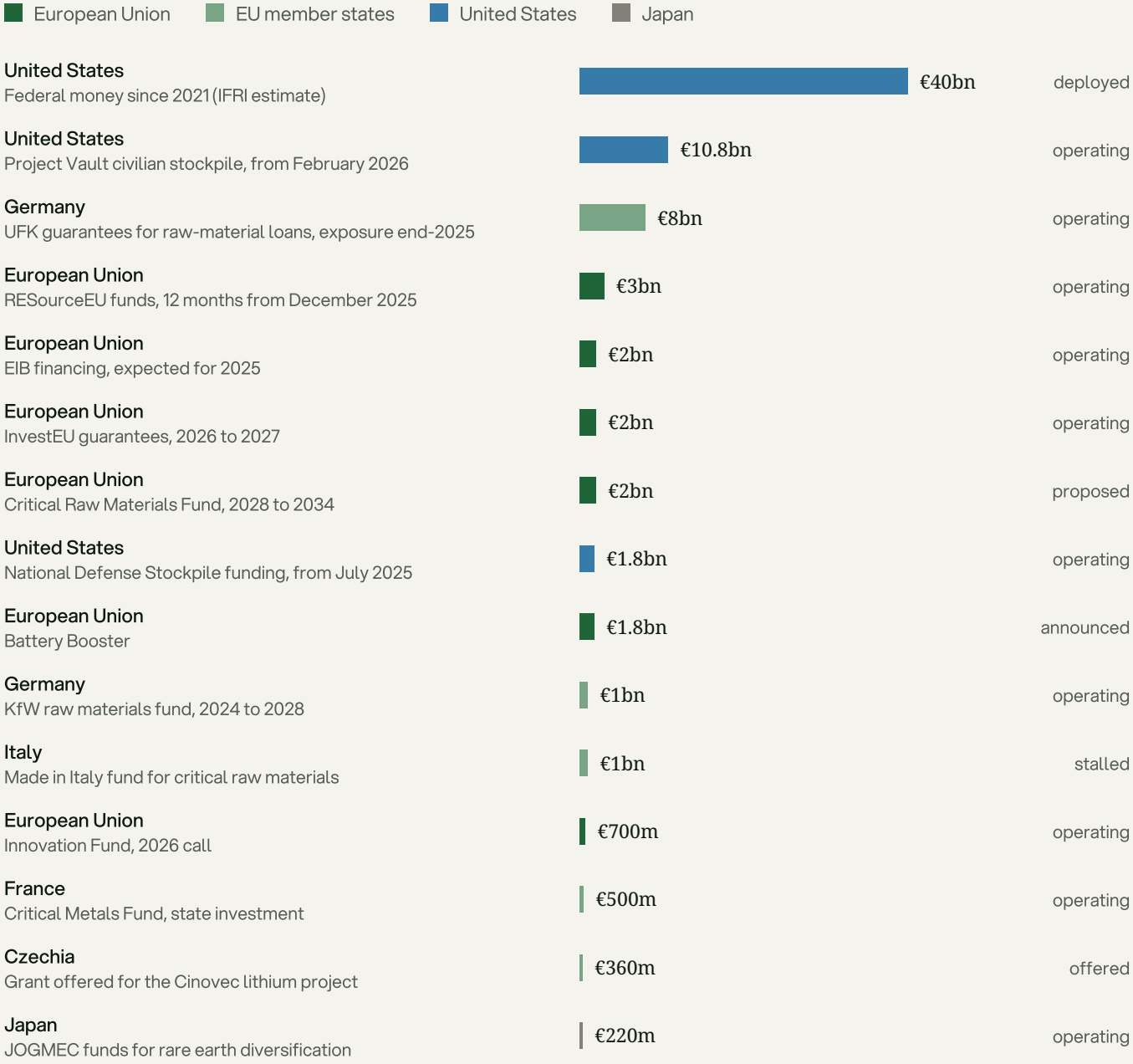
Germany's KfW raw materials fund holds up to €1bn for 2024 to 2028, and federal UFK guarantees cover €8bn of raw-material loans. France anchors a Critical Metals Fund with €500m. Italy's €1bn fund was described as inactive in December 2025. The US federal government has deployed an estimated €40bn since 2021, according to IFRI.[7]



PUBLIC MONEY

Public money for critical raw materials

€bn. The bars cover different instruments and periods: read each with its period and status, and do not add them up.



Source: Hercinia compilation from the European Commission, EIB, KfW, Euler Hermes (UFK), the French and Italian governments, CEZ, IFRI, US Department of Defense and JOGMEC; links in the data file. Converted at ECB reference rates of 27 October 2026.

07 Stockpiles

Japan's JOGMEC holds national stocks of 34 rare metals. The target is generally 60 days of use, and longer, such as 180 days, for minerals at high geopolitical risk. The United States gave its National Defense Stockpile US$2bn of new funding in July 2025 and launched a US$12bn civilian stockpile, Project Vault, in February 2026.[9]

STOCKS

Who holds stocks of critical raw materials

Japan and the United States hold stocks. In Europe, no stockpile is confirmed as running.

WHO	MEASURE	WHAT IT HOLDS	STATUS
Japan	JOGMEC national stockpile of 34 rare metals	Generally 60 days of use, up to 180 days for high-risk minerals	operating
United States	National Defense Stockpile	US$2bn added from July 2025; cobalt, antimony, tantalum, scandium	operating
United States	Project Vault	US$12bn civilian stockpile of about 60 minerals	operating
Australia	Critical Minerals Strategic Reserve	A$1.2bn; antimony, gallium, NdPr, dysprosium and terbium first	announced
NATO, 12 allies	Joint stockpiling project, 7 July 2026	No budget, volumes or materials published	adopted
European Union	Stockpiling pilot	Italy, Germany and France reported to lead; not confirmed as running	announced
European Union	Critical Raw Materials Centre with contingency stocks	Parliament position 20 October 2026; trilogue from 4 November 2026	in negotiation
Germany	No state stockpile	Support for company stocks under review (27 August 2026)	none

Source: JOGMEC; US Department of Defense; Al Jazeera (Project Vault); Australian Government; NATO, 7 July 2026; European Parliament; Bundestag printed paper 21/7684, 21 August 2026.

In Europe, a stockpiling pilot led by Italy, Germany and France was reported but is not confirmed as running. Germany holds no state stockpile and is examining support for company stocks.[9] In July 2026, twelve NATO allies launched a joint project to buy, store, transport and manage critical raw materials for defence; no budget has been published. The European Parliament and the Council were due to begin talks on amending the Critical Raw Materials Act on 4 November 2026. The texts under negotiation include EU contingency stocks.[10]



08 What to watch

COMING UP From 30 October 2026.

DATE	WHAT HAPPENS	SOURCE
4 Nov 2026	Trilogue on the CRMA amendment and the Critical Raw Materials Centre begins	Council document ST 15112/26
10 Nov 2026	China's suspension of its October 2025 export controls ends unless extended	MOFCOM Announcement No. 70 of 2025
27 Nov 2026	China's suspension of its ban on gallium, germanium and antimony exports to the US ends unless extended	MOFCOM Announcement No. 72 of 2025
Dec 2026	Expected: third call for EU Strategic Projects; EU action plan on defence raw materials; Circular Economy Act	European Commission
9 Dec 2026	Black mass and most lithium-ion battery waste become hazardous waste in the EU	Delegated Decision (EU) 2025/934
31 Dec 2026	QatarEnergy's force majeure on LNG deliveries to Italy's Edison is set to end	Edison, 27 October 2026
1 Jan 2027	Zimbabwe bans lithium concentrate exports; US defence procurement may no longer buy Chinese tungsten	Government notices as reported
10 Jan 2027	The China-US Kuala Lumpur arrangement runs to this date	MOFCOM, 28 September 2026
24 May 2027	Deadline for the review of the EU lists of critical and strategic raw materials	JRC RMIS

Source: Council of the EU; European Commission; MOFCOM; Edison; JRC RMIS; government notices as reported.

09 Limits of the data

- EU import reliance and EU sourcing come from the Commission's 2023 study and are averages for 2016 to 2020. They predate the sanctions on Russia and the export controls since 2023. The Commission must review the EU lists of critical and strategic raw materials by 24 May 2027.
- World shares come from the USGS Mineral Commodity Summaries 2026 and the IEA Global Critical Minerals Outlook 2026, mostly for 2025. Where sources disagree, the Atlas names the figure used and the alternatives.
- Some 2026 events rest on press or trade reports. They are marked as secondary sources.
- Hercinia checked the status of 27 of the 106 Strategic Projects.
- Import values exclude scrap, semi-finished products and customs codes that mix several materials, so the true total is slightly higher. Amounts in other currencies are converted at ECB reference rates of 27 October 2026.

APPENDIX A

Europe’s own supply

MATERIAL	EU DEMAND A YEAR	EU CAPACITY 2016 TO 2020: EXTRACTION / PROCESSING / RECYCLING	PROJECTS DUE BY 2030, SHARE OF 2030 DEMAND	POTENTIAL BY ABOUT 2040
Aluminium and bauxite	13,513,000 t Al	10% / 37% / 32%	No public figure	More than 50%
Antimony	16,675 t Sb	0% / 91% / 28%	60%	10% to 50%
Arsenic	1,286 t As	0% / 57% / 0%	No public figure	More than 50%
Baryte	497,164 t $BaSO_4$	21% / n/a / 0%	No public figure	10% to 50%
Beryllium	34.5 t Be	0% / 0% / 0%	No public figure	Under 10%
Bismuth	3,858 t Bi	0% / 26% / 0%	No public figure	10% to 50%
Boron	242,900 t B_2O_3	0% / 29% / 1%	0%	More than 50%
Cobalt	10,946 t Co	8% / 92% / 22%	No public figure	10% to 50%
Coking coal	49,000,000 t coking coal	24% / n/a / 0%	29%	10% to 50%
Copper	3,688,419 t Cu	25% / 72% / 55%	No public figure	More than 50%
Feldspar	9,800,000 t feldspar	46% / n/a / 1%	No public figure	More than 50%
Fluorspar	654,922 t CaF_2	27% / n/a / 1%	No public figure	10% to 50%
Gallium	33.2 t Ga	n/a / 0% / 0%	151%	More than 50%
Germanium	13.8 t Ge	n/a / 50% / 2%	No public figure	Under 10%
Hafnium	11.3 t Hf	0% / 265% / 0%	398%	More than 50%
Heavy rare earths	671 t REO	0% / 0% / 1%	70%	10% to 50%
Helium	34.9 million m^3 He	8.6% / 8.6% / 1%	No public figure	Under 10%
Light rare earths	4,734 t REO	0% / 0% / 1%	24%	10% to 50%
Lithium	5,000 t Li	8% / 0% / 0%	26%	More than 50%
Magnesium	120,520 t Mg metal	n/a / 0% / 13%	17%	More than 50%
Manganese	1,034,198 t Mn	1% / 31% / 9%	No public figure	10% to 50%
Natural graphite	79,412 t natural graphite	1% / 0% / 3%	6%	Under 10%
Nickel	257,147 t Ni	16% / 23% / 16%	No public figure	10% to 50%
Niobium	2,813 t Nb	0% / 5% / 0%	No public figure	Under 10%
Phosphate rock	1,982,108 t P_2O_5	17% / n/a / 17%	No public figure	10% to 50%
Phosphorus	73,731 t P_4	n/a / 0% / 0%	No public figure	Under 10%
Platinum group metals	127.7 t Pt + Pd	1.7% / 1% / 12%	No public figure	10% to 50%
Potash	2,200,000 t K_2O	157% / n/a / 0%	No public figure	More than 50%
Scandium	3.7 t Sc	0% / 0% / 0%	No public figure	More than 50%
Silicon metal	421,141 t Si	n/a / 34% / 0%	No public figure	More than 50%
Strontium	53,577 t Sr	82% / n/a / 0%	No public figure	More than 50%
Tantalum	403 t Ta	1% / 157% / 21%	No public figure	10% to 50%
Titanium metal	9,812 t Ti	0% / 0% / 1%	No public figure	10% to 50%
Tungsten	17,273 t W	20% / 19% / 42%	27%	More than 50%
Vanadium	4,351 t V	0% / 0% / 1%	No public figure	10% to 50%

Demand: SCRREEN and the Commission’s 2023 study. Capacity: European Court of Auditors, Special report 04/2026, Figure 5, where available, otherwise SCRREEN. Pipeline: Hercinia sum of public project capacity. Shares above 100% mean EU capacity exceeds EU demand, as where the EU refines imported feed for export. Potential: Hercinia’s assessment; resources are not reserves.

APPENDIX B

Sources

1 Regulation (EU) 2024/1252 of 11 April 2024, Critical Raw Materials Act https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials/critical-raw-materials-act_en

2 European Court of Auditors, Special report 04/2026, Critical raw materials for the energy transition: not a rock-solid policy, 3 February 2026 https://www.eca.europa.eu/ECAPublications/SR-2026-04/SR-2026-04_EN.pdf

3 Hercinia, Europe's Critical Materials Atlas, Europe's own supply: SCRREEN factsheets, USGS Mineral Commodity Summaries 2026, national surveys and company reports, as cited per material in the data file

4 European Commission, press release IP/26/2113 and Q&A 26/2114, 9 October 2026; earlier lists: Commission, March and June 2025; expected capital investment summed by Hercinia https://ec.europa.eu/commission/presscorner/detail/en/ip_26_2113

5 Reuters, Exclusive: Some critical mineral firms chosen by EU flag project liquidity concerns, 8 September 2026 (secondary source)

6 Eurostat Comext DS-045409, extra-EU imports 2025, summed by Hercinia. Eurostat is not responsible for this use of its data. https://ec.europa.eu/eurostat/web/international-trade-in-goods/database

7 Hercinia compilation of public money from the European Commission, EIB, KfW, Euler Hermes, French and Italian governments, CEZ, IFRI, US Department of Defense and JOGMEC; links in the data file

8 S&P Global, EU lawmakers vote to create raw materials agency to cut reliance on China, 20 October 2026 https://www.spglobal.com/energy/en/news-research/latest-news/metals/102026-eu-lawmakers-vote-to-create-raw-materials-agency-to-cut-reliance-on-china

9 IEA Policies database, Japan: International Resource Strategy, national stockpiling system; Mining Technology, Pentagon stockpile, July 2025; Al Jazeera, Project Vault, February 2026; Bundestag printed paper 21/7684, 21 August 2026 https://www.iea.org/policies/16639-international-resource-strategy-national-stockpiling-system

10 NATO, Allies launch new project on critical raw materials for defence, 7 July 2026; Council of the EU, document ST 15112/26, 28 October 2026 https://data.consilium.europa.eu/doc/document/ST-15112-2026-INIT/en/pdf

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Hercinia is a Luxembourg company set up to acquire, finance and develop critical raw material deposits in Europe and the plants that process them.

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