



# The EU Critical Raw Materials list and the September 2020 Action Plan

*EuChemS-Webinar The Value is on circularity  
5 November 2020*

***Peter Handley***

*Head of Unit C2 - «Energy Intensive Industries and  
Raw Materials»*

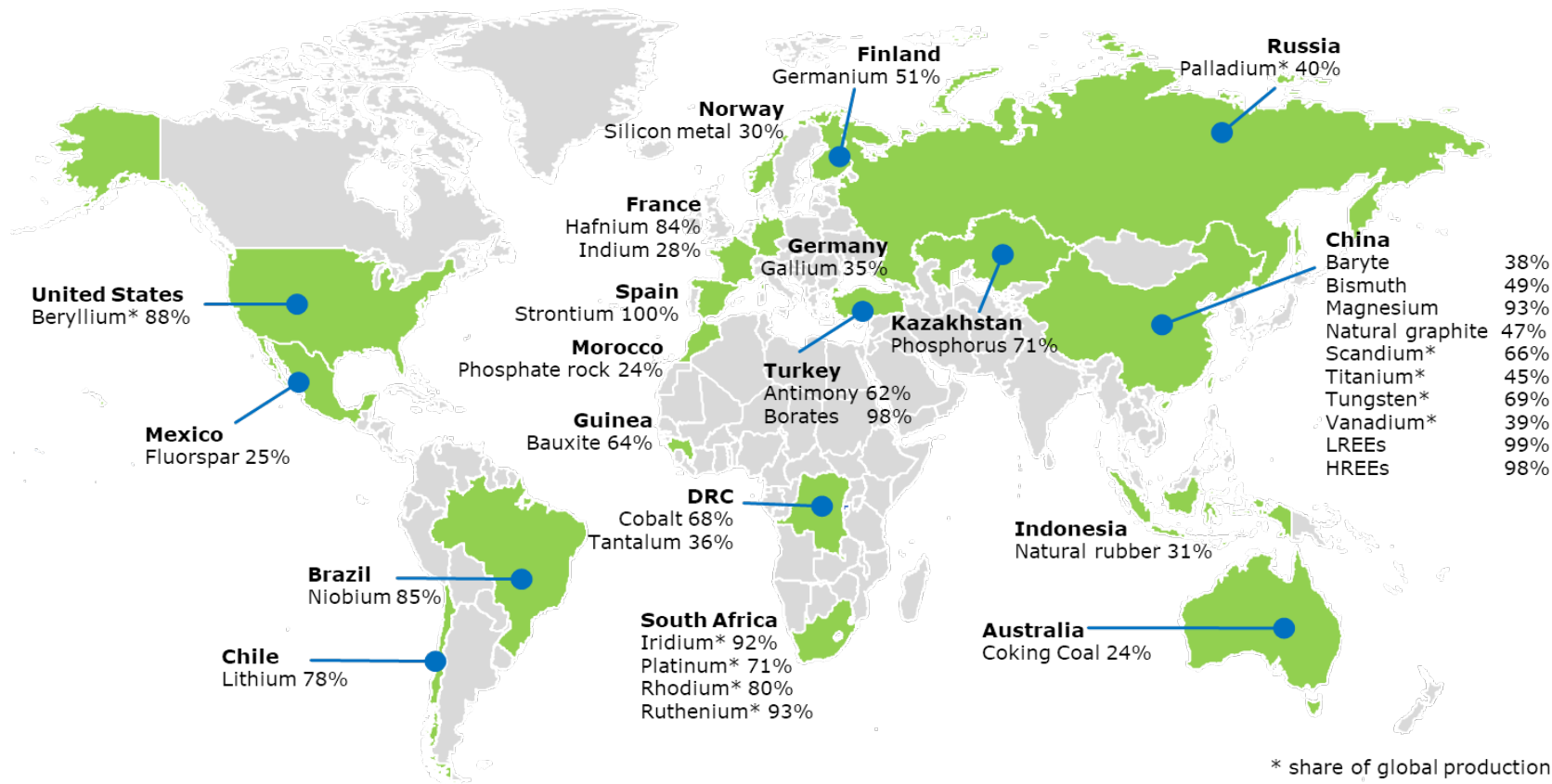
*European Commission, Directorate-General for Internal  
Market, Industry, Entrepreneurship and SME's (DG  
GROW).*

**Raw  
Materials**

# The 2020 criticality assessment identifies 30 raw materials as critical

2020 Critical Raw Materials (new as compared to 2017 in bold)		
Antimony	Hafnium	Phosphorus
Baryte	Heavy Rare Earth Elements	Scandium
Beryllium	Light Rare Earth Elements	Silicon metal
Bismuth	Indium	Tantalum
Borate	Magnesium	Tungsten
Cobalt	Natural Graphite	Vanadium
Coking Coal	Natural Rubber	<b>Bauxite</b>
Fluorspar	Niobium	<b>Lithium</b>
Gallium	Platinum Group Metals	<b>Titanium</b>
Germanium	Phosphate rock	<b>Strontium</b>

# Where the EU sources from



Source: JRC (2020): Study on the EU's list of critical raw materials

# Critical raw materials are used throughout Europe's ecosystems

	Aerospace/defence	Textiles	Electronics	Mobility/Automotive	Energy-intensive industries	Renewable energy	Agri-food	Health	Digital	Construction
Antimony	✓	✓		✓						✓
Baryte				✓	✓			✓		✓
Bauxite	✓	✓		✓	✓	✓	✓		✓	✓
Beryllium	✓			✓		✓			✓	
Bismuth	✓			✓	✓			✓		
Borate	✓		✓	✓	✓		✓		✓	✓
Cobalt	✓	✓		✓	✓	✓			✓	
Coking coal				✓	✓	✓				
Fluorspar				✓	✓		✓			
Gallium	✓		✓	✓		✓			✓	✓
Germanium	✓			✓	✓					
Hafnium	✓			✓					✓	
Indium	✓		✓	✓		✓				
Lithium	✓		✓	✓	✓			✓		
Magnesium	✓			✓	✓				✓	✓
Natural graphite	✓			✓	✓					✓
Natural Rubber	✓	✓		✓				✓		
Niobium	✓		✓	✓				✓		✓
Phosphate rock				✓	✓		✓			
Phosphorus	✓			✓	✓		✓			
Scandium	✓			✓	✓	✓				
Silicon metal	✓	✓	✓	✓	✓	✓		✓		✓
Strontium	✓			✓	✓			✓		
Tantalum	✓		✓	✓	✓	✓			✓	
Titanium	✓		✓	✓	✓			✓		✓
Tungsten	✓			✓	✓			✓		
Vanadium	✓			✓	✓	✓		✓		✓
PGM	✓			✓	✓	✓		✓		✓
HREE	✓		✓	✓	✓	✓		✓		✓
LREE	✓		✓	✓	✓	✓		✓		✓

# Most raw materials are not sufficiently recycled

End-of-life recycling input rate (EOL-RIR) [%]

																		Legend														
																		> 50%	> 25-50%	> 10-25%	1-10%	< 1%										
H																	He	1%														
Li	Be													B*	C	N	O	F*	Ne													
0%	0%													0.6%				1%														
Na	Mg													Al	Si	P*	S	Cl	Ar													
	13%													12%	0%	17%	5%															
K*	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr															
0%		0%	19%	44%	21%	12%	31%	35%	34%	17%	31%	0%	2%		1%																	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe															
		31%		0%	30%		11%	9%	9%	55%		0%	32%	28%	1%																	
Cs	Ba	La-Lu <sup>1</sup>	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn															
	1%		1%	1%	42%	50%		14%	11%	20%			75%	1%																		
Fr	Ra	Ac-Lr <sup>2</sup>	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Fl	Uup	Lv	Uus	Uuo															

<sup>1</sup> Group of Lanthanide	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
	1%	1%	10%	1%		1%	38%	1%	22%	0%	1%	0%	1%	1%	1%
<sup>2</sup> Group of Actinide	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Aggregates	Bentonite	Coaking Coal	Diatomite	Feldspar	Gypsum	Kaolin Clay	Limestone	Magnesite	Natural Cork	Natural Graphite	Natural Rubber	Natural Teak Wood	Perlite	Sapele wood	Silica Sand	Talc
7%	50%	0%	0%	10%	1%	0%	58%	2%	8%	3%	1%	0%	42%	15%	0%	5%

\* F = Fluorspar; P = Phosphate rock; K = Potash, Si = Silicon metal, B = Borates.



# Action Plan on Critical Raw Materials



# 10 actions to ensure Europe's access to raw materials

1. European Raw Materials Alliance
2. Develop sustainable financing criteria for mining
3. Research and innovation on waste processing, advanced materials and substitution
4. Map the potential supply of secondary CRM from EU stocks and wastes
5. Investment needs for mining projects that can be operational in 2025
6. Develop expertise and skills in mining
7. Deploy Earth observation programmes for exploration, operation and post-closure environmental management
8. Develop research and innovation projects on exploitation and processing of CRMs
9. Develop strategic international partnerships to secure CRMs supply
10. Promote responsible mining practices for CRMs



# The European Raw Materials Alliance

- A dedicated alliance to strengthen Europe's **resilience** and **open strategic autonomy** in the field of raw materials
- First priority area: Strengthening capacity in the **rare earths and magnets** value chain
- Workstreams:
  1. **Consultations** with a wide range of stakeholders
  2. Raw materials **investment** platform
- Launched on 29 September 2020

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RAW MATERIALS  
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