Lithium in Portugal and the European Context

Webinar Chile-Portugal Cooperation on Lithium Innovation

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The EU-Chile Interim Trade Agreement (ITA), which entered into force on 1 February 2025

Thematic cooperation on Raw Materials (art. 8.14)

- Recognising their shared commitment to responsible sourcing and sustainable production of raw materials and their mutual interest to facilitate **the integration of raw materials value chains**, the Parties agree to cooperate on any relevant issue of mutual interest, such as: a) responsible mining practices and raw materials value chains sustainability, including the contribution of the raw materials value chains to the fulfilment of the UN Sustainable Development Goals; b) raw materials value chains, including value addition; c) identification of areas of common interest for **cooperation on research, development, and innovation activities covering the entire raw materials value chain,** including cutting-edge technologies, smart mining and digital mines. 4. Cooperation activities will be developed taking into account available resources. Activities can be carried out in person or by any technological means available to the Parties. 5. Cooperation activities can be developed and implemented with the participation of international organizations, global fora, research institutions, as agreed between the Parties.

European Critical Raw Materials Act

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

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

European Commission

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 (green, digital, 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 **25%** 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.

European Commission

Critical Raw Materials

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

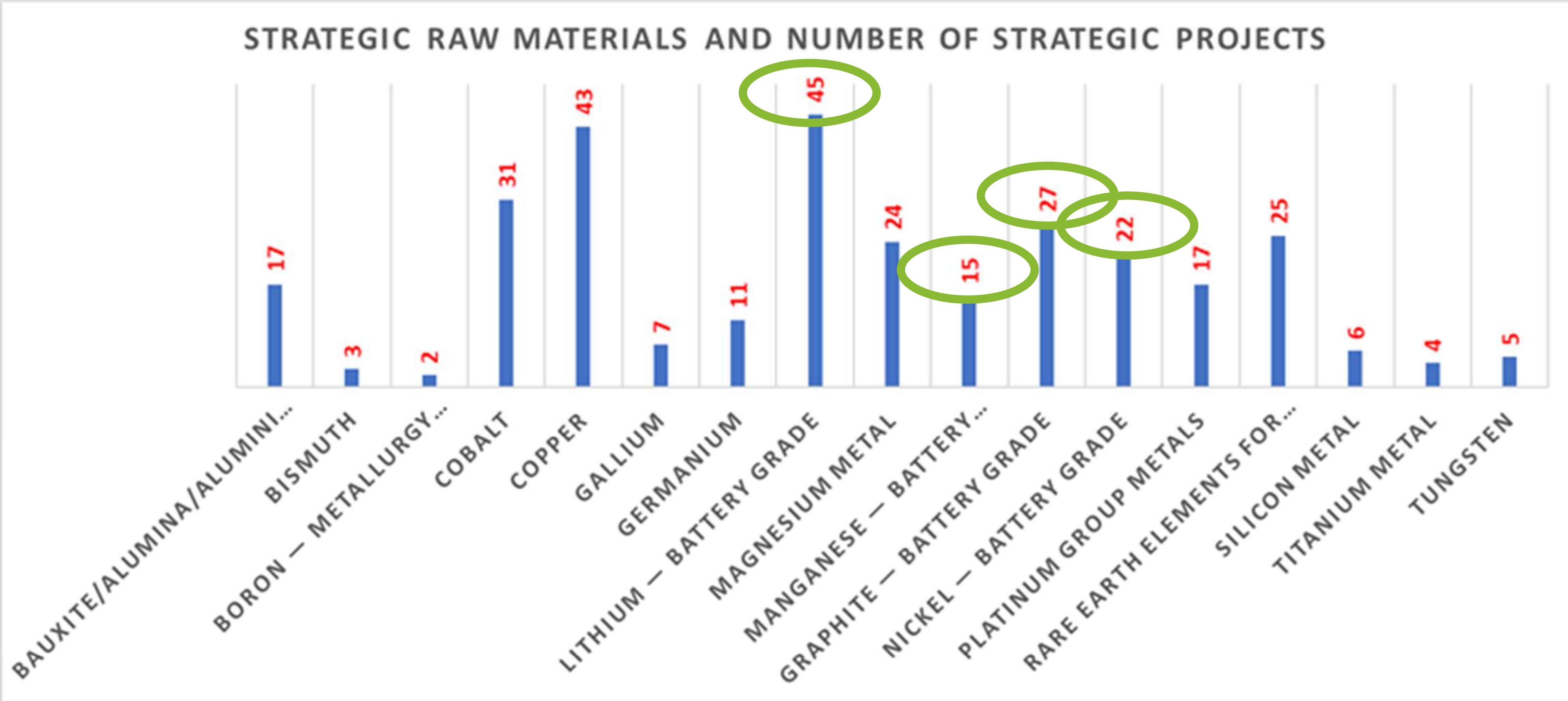
34 RAW MATERIALS DEFINED AS CRITICAL BY THEIR HIGH

- Economic importance
- Supply risk

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

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

European Commission



European Commission

Strategic Projects for the EU

MAP LEGEND

Extraction
Processing
Recycling
Substitution

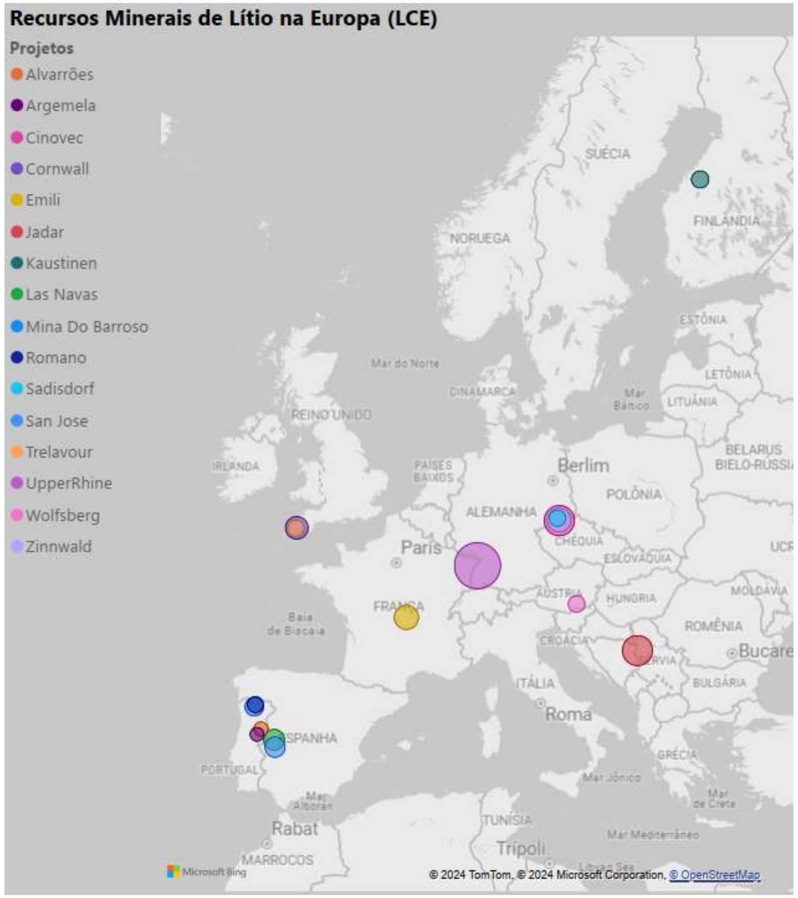
Al	Aluminium
B	Boron
BRMs	Battery Raw Materials [1]
Co	Cobalt
Cu	Copper
Ga	Gallium
Ge	Germanium
C	Graphite
Li	Lithium
Mg	Magnesium
Mn	Manganese
Ni	Nickel
PGMs	Platinum Group Metals
REEs	Rare Earth Elements
W	Tungsten

[1] *Battery Raw Materials refer to lithium, cobalt, nickel, manganese and graphite*

Disclaimer: The location of projects is based on a regional scale and doesn't reflect their exact geographical locations

47 Strategic Projects Selected (15 for Li)

Lithium Mineral Resources in Europe



Fonte: paginas das empresas e relatórios públicos

Project	Ownership	Location	Resources (Mt)	% Li2O	LCE (Mt)
Alvarrões	Mota Ceramic Solutions	Portugal	5,9	0,87%	0,13
Argemela	Neomina	Portugal	11,1	0,45%	0,12
Cinovec	EMH-CEZ	Czech	695,9	0,42%	7,26
Cornwall	Imerys British Lithium	UK	160,8	0,54%	2,14
Emili	Imerys	France	116,7	1,00%	2,89
Jadar	Rio Tinto	Serbia	143,5	1,80%	6,39
Kaustinen	Sibanye-Stillwater's	Finland	17,0	1,02%	0,43
Las Navas	Lithium Iberia	Spain	58,5	0,98%	1,42
Mina Do Barroso	Savannah Resources	Portugal	28,0	1,05%	0,73
Romano	Lusorecursos	Portugal	10,3	1,00%	0,25
Sadisdorf	Lithium Australia	Germany	25,0	0,46%	0,28
San Jose	Infinity Lithium	Spain	65,4	0,74%	1,20
Trelavour	Cornish Lithium	UK	51,7	0,24%	0,31
Wolfsberg	European Lithium	Austria	12,9	1,00%	0,32
Zinnwald	Zinnwald Lithium	Germany	226,8	0,47%	2,66
Total					**26,52**

SEMINAR “BUILDING THE LITHIUM VALUE CHAIN IN PORTUGAL”

(Brussels, June 2018)

Concluding Remarks

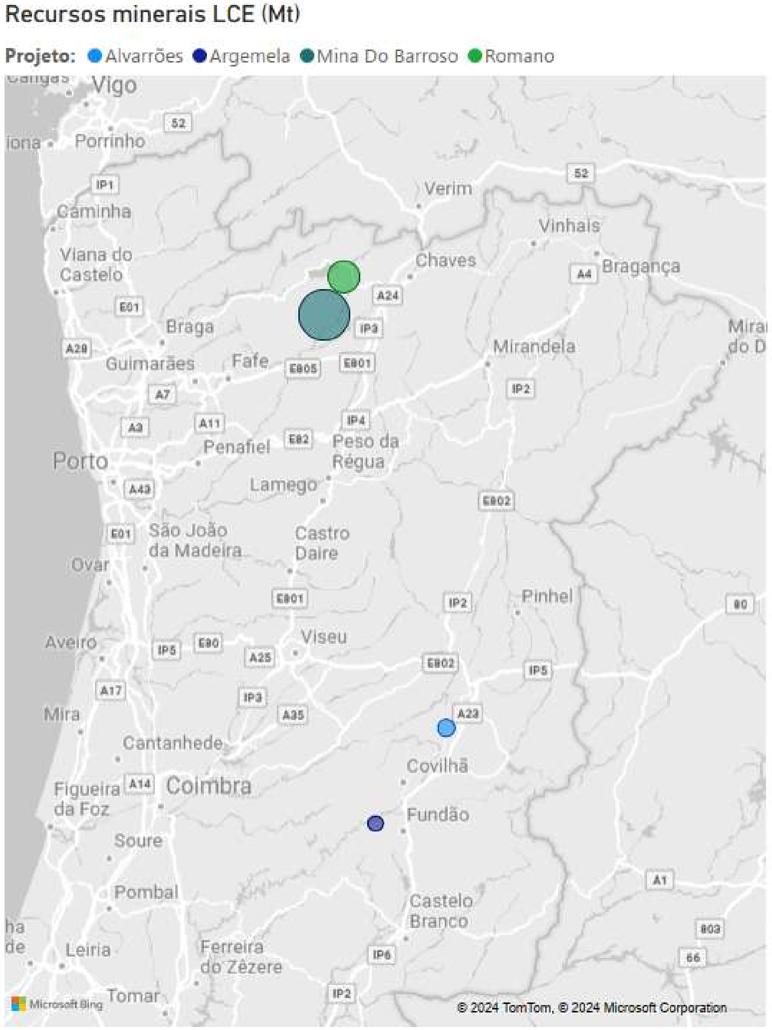
- The Government of Portugal clearly supports the building of a lithium value chain in the country.
- Portugal has a very favorable geological context: resources and reserves can increase dramatically, especially on depth, with drilling development.
- Several national and international companies are investing in lithium exploration and mining and some projects are quite advanced, allowing to forecast a great increase in production.
- Know-how in lithium exploration, mining and processing, in research institutions, academia and industry, exists.

- Despite the mineralogical heterogeneity of the lithium deposits, that should be investigated with the objective of transform them in a more homogeneous product, there are capacity for having a common battery grade refining unit, producing lithium hydroxide/carbonate, used by several companies producing lithium concentrates.
- This unit would be supplier of cathode material manufacturers, designed since the beginning for having an important recycling sector and being also fed by recycled lithium concentrates.
- EU member states have a unique momentum to establish this kind of units in Europe, avoiding concentrates exports to other parts of the World (the "Australian Model") and the loose of the respective added value, like the EC Strategical Plan launched recently and mentioned in several official communications, incentives, creating also several financial tools and articulation with the European Investment Bank that will allow the concretization of that objective.
- Portugal, considering the points referred above, has all the conditions to be one of those member states, but should act quickly and in a competitive way, working with all the stakeholders, including the downstream users.

2024-11-12 • 14:31 - 17:56
Confirmation hearing of Stéphane SÉJOURNÉ, Commissioner-designate, Prosperity and Industrial Strategy
Confirmation hearing of Stéphane SÉJO...
17:35:27 / 17:56:23
CONFIRMATION HEARINGS 2024
EXECUTIVE VICE-PRESIDENT FOR PROSPERITY AND INDUSTRIAL STRATEGY
European Parliament

The northern and central region of Portugal is part of the tungsten-tin NW Province of the Iberian Peninsula, characterized by the occurrence of aplitopegmatitic and hydrothermal structures that are locally enriched in minerals of those metals, as well as in lithium minerals

Lithium Mineral Resources in Portugal



Project	Concessionaire	Mineral Resources (Mt)	% LiO2	Li dominant mineral
Barroso	Savannah Resources	39.1	1.05	Spodumene
Romano (Montalegre)	Lusorecursos	15.6	1.09	Petalite
Alvarrões	Mota Ceramic Solutions	5.9	0.87	Lepidolite
Argemela	Neomina	11.1	0.45	Montebrasite

CLUSTER PORTUGAL MINERAL RESOURCES

1 PROMOTION OF KNOWLEDGE AND INNOVATION

2 ECONOMIC EVALUATION AND INTERNATIONALISATION

3 RESPONSIBLE MINERAL RESOURCES MANAGEMENT

4 QUALIFICATION AND SOCIAL RESPONSIBILITY

5 COOPERATION AND NETWORKING

We promote knowledge and sustainable economic value for mineral resources sector, boosting the export capacity and added value.

ON GOING PROJECTS

Sustainable Stone by Portugal

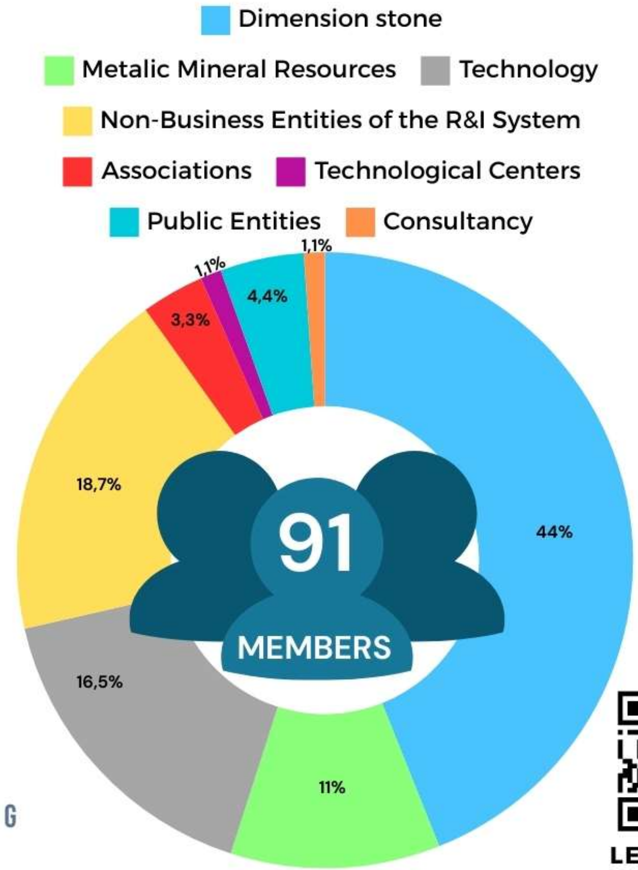
DIGITAL built European Digital Innovation Hub

I4-GREEN

RISE

MULTISSECTORIAL COOPERATION

Mineral Resources are the basis of several industrial value chains



ALLIANCES & PARTNERSHIPS

EUROPEAN RAW MATERIALS ALLIANCE | ERMA

EUROPEAN CLUSTERS ALLIANCE

European Innovation Partnership on Raw Materials

S3P MINING PARTNERSHIP

LET'S TALK!

Thank you

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