

PORTUGAL MINERAL RESOURCES

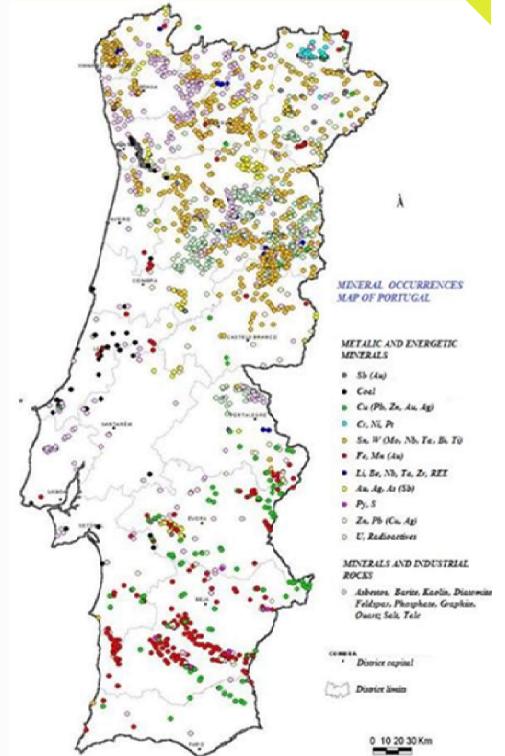
DGEG-General Directorate for Energy and Geology

Rui Coelho

Joint Study Group's Seminar

Lisbon, 26/4/2023

Incentivizing Investment in Base Metal Mining



MINING IN PORTUGAL

History

Mining since Roman times (from I B.C. to IV A.C.)

Geology

Complex and diversified geology

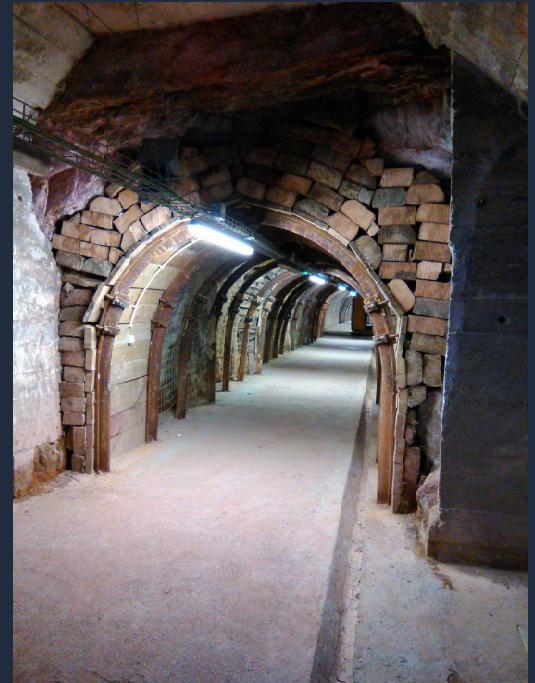
High potential in:

- **base metals - copper, zinc, lead**
- **critical minerals - lithium and tungsten**

Framework

Stable, coherent, updated mining Law and regulations

DGEG: Portugal Mining Authority



Mining activity (2023)

115 operating mines

1 273 quarries

200 000 workers employed (4% of the employed pop.)

5 000 M€ Gross Value Added (2.3% Portuguese GDP)

Sustainable mining

National, regional and local decision makers

Stakeholders participation and communication

Transparency

Environmental assessment and monitoring

Royalties plan for the benefit of communities

Land use planning

DGEG participate actively in the land use plans at national, regional and local level

Sectorial Management Mineral Resources Plan being prepared



IBERIAN PYRITE BELT

2 underground polymetallic mines:

- Neves Corvo mine
- Aljustrel mine

ZINC *

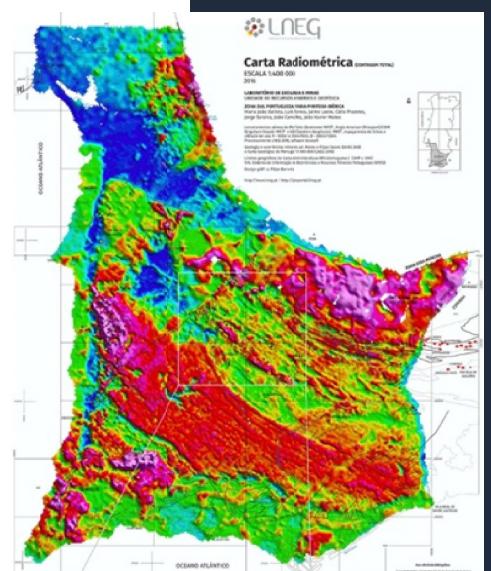
Production: 390 000ton/year
Value: 317 M€
Exports mainly to Norway, Spain and Belgium

COPPER *

Production: 167 000 ton/year
Value: 280 M€
Exports mainly to Finland

*Concentrates

South of Portugal - World class Base Metals that hosts 2 giant ore deposits. Potential to new discoveries of hidden reserves - new investment in deep geophysics are very promising.



ZINC



Neves-Corvo

- Employs over 1.300 workers, plus a 1.200 working force over several external contractors
- Recent milestones - ZEP (Zinc Expansion Project):
 - expansion of all Zn production (mining entered 2nd Phase Lombador's orebody);
 - expansion of Zn ore processing plant;
 - expansion Cerro do Lobo's tailings dam;
 - SAG Mill - 1,1 million ton/y of ore processing capacity upgraded to 2,5 million ton/y;
- Existing Zn resources:
 - ~72 million ton of Zn ore, bringing ~5million ton metal Zn;
- Annual production:
 - ~ 200.000 ton of Zn ore concentrate @ 48% Zn (100.000 - 110.000 ton metal Zn)

ZINC

Aljustrel



- Employs over 700 workers, plus a 300 working force over several external contractors
- Recent milestones:
 - development to begin Estação's orebody mining;
 - expansion of Zn ore processing plant;
 - expansion of tailings dam capacity;
 - 19,6MVA photovoltaic plant under construction.
- Existing Zn resources:
 - ~35 million ton of Zn ore, bringing ~1,5million ton metal Zn;
- Annual production:
 - ~ 229.000 ton of Zn ore concentrate @ 47,5% Zn (~110.000 ton metal Zn)

Critical Raw Materials in PT

LITHIUM

- **Lithium is critical to the energy transition.**
- **2 mining projects waiting EIA decision:**
“MINA DO BARROSO” (Boticas) – Savannah Lithium, Lda.
“ROMANO” (Montalegre) – Lusorecursos Portugal Lithium, SA
- **1 mine going to start EIA:** “ARGEMELA” (Covilhã e Fundão) – Neomin, Lda,
- **6 potential exploration areas:** intention to launch exploration tenders in 2023

TUNGSTEN

- **Production:** 908 ton/year
- **Value:** 12 M€
- **Exports mainly to USA and Austria**

Panasqueira Mine Beralt Tin & Wolfram Portugal S.A.”



COPPER

Recently included in the CRM list

Neves-Corvo

- Existing Cu resources:
~80 million ton of Cu ore, bringing ~2 million ton metal Cu;
- Annual production:
~170.000 ton of Cu ore concentrate @ 23% Cu (33.000 - 38.000 metal Cu)

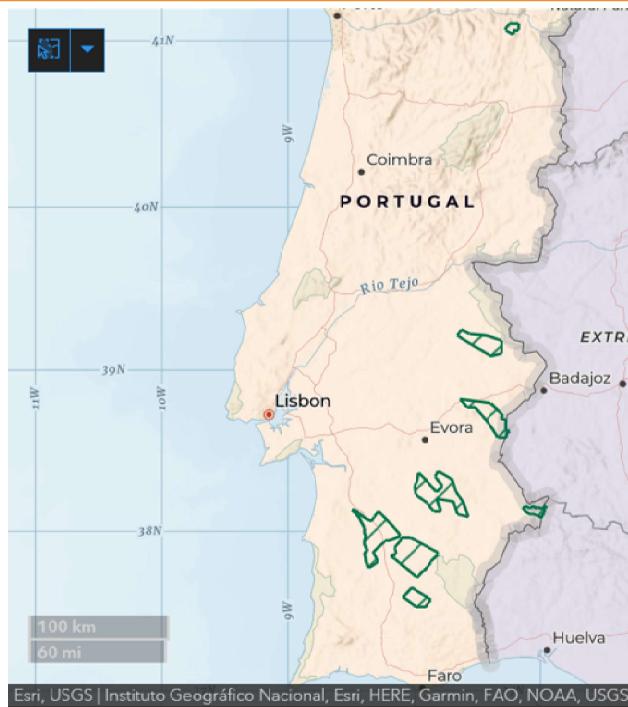


Aljustrel

- Existing Cu resources:
~35 million ton of Cu ore, bringing ~413 thousand ton metal Cu;
- Annual production: currently focused on mining Zn orebodies



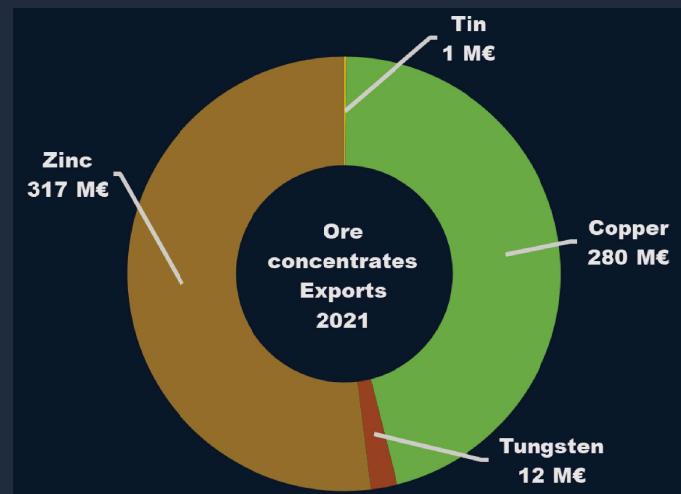
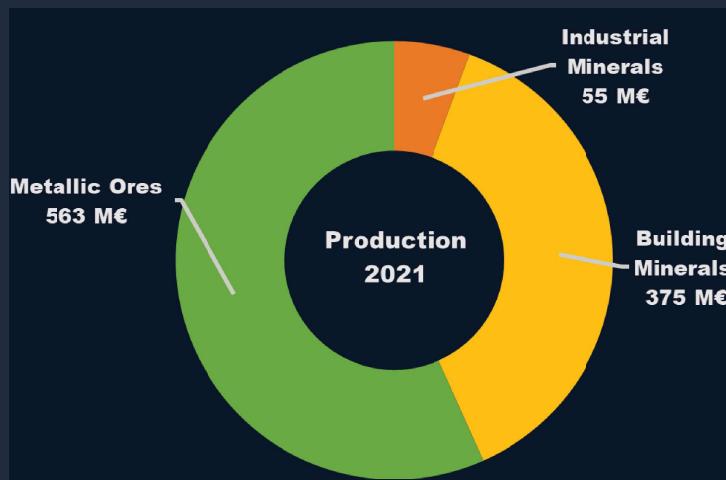
MINING EXPLORATION - METALS



 MNPP00221 ASSUMAR 28/10/2021 Bloco Único 266,69 Km ²
 MNPP00321 BORBA 2 28/10/2021 Bloco Único 328,52 Km ²
 MNPP00121 CIRCO 28/10/2021 Bloco Único 254,52 Km ²
 MNPP00820 ALBERNÓA 15/06/2020 Bloco Único 500,00 Km ²
 MNPP00520 ALTO DE SANTO AMARO 15/06/2020 Bloco Único 43,19 Km ²
 MNPP00420 BARRANCOS 15/06/2020 Bloco Único 73,20 Km ²
 MNPP00120 ERMIDAS 15/06/2020 Bloco Único 499,68 Km ²
 MNPP00320 GRIJÓ 15/06/2020 Bloco Único 16,00 Km ²
 MNPP00220 PORTEL 15/06/2020 Bloco Único 491,34 Km ²
 MNPP00319 VIMIOSO 08/10/2019 Bloco Único 27,50 Km ²
 MNPP00119 VINHAIS 28/03/2019 Bloco Único 182,26 Km ²
 MNPP00218 NEVES 28/06/2018 Bloco Único 140,59 Km ²

Currently
12 exploration permits seeking for metals
(source: www.dgeg.gov.pt)

STATISTICS MINERAL RESOURCES



European Critical Raw Materials Act

DGEG welcomes the initiative, in order to set a harmonised framework for addressing supply risks. Critical Raw Materials Act as an excellent and important step forward, as it makes it possible to streamline and overcome some of the existing obstacles in terms of legislation and others, safeguarding fundamental principles of access to mineral resources.

- Recognition of raw materials as indispensable for the energy and digital transition and for circularity with increased recycling along the value chain, faster and more expeditious permitting of Strategic Projects
- Copper and feldspar becomes listed as a new critical raw materials.
- PT is analyzing the CRM Act and its articulation with PT mining framework

PT MINING FRAMEWORK

Recently revised in 2021 and 2022

Higher Transparency along mining rights/permitting procedures.

Municipalities strengthened position towards exploration and mining projects.

Corporate social responsibility of mining companies is included. This is essential for creating trust and awareness with local communities.

Public participation is improved. All stakeholders are invited to "have a say".

THANK YOU



www.dgeg.gov.pt

rg.minas@dgeg.gov.pt

rg.internacional@dgeg.gov.pt

