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PERU, A WORLD-CLASS ACTOR IN MINING AND THE ENERGY TRANSITION

Romulo Mucho
Minister of Energy and Mines

September 2024

PERÚ

MINEM

The Ministry of Energy and Mines serves as the central governing body of the Energy and Mining Sector and and is a key component of the Executive Branch. Its primary objective is to develop and evaluate national policies for the sustainable development of mining and energy activities, in alignment with overall government policy and plans. Additionally, it holds authority over environmental matters related to these activities.

Rómulo Mucho Mamani
Minister of Energy and Mines

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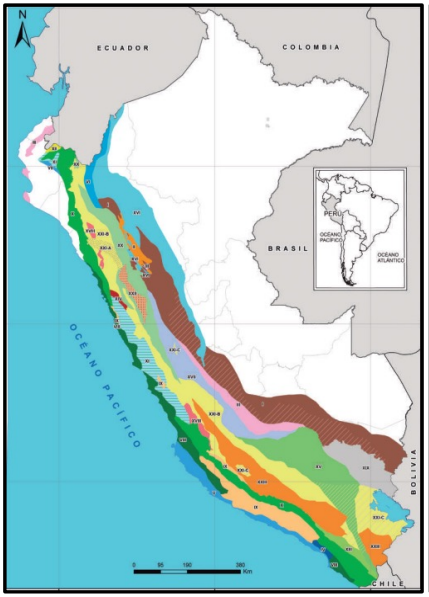
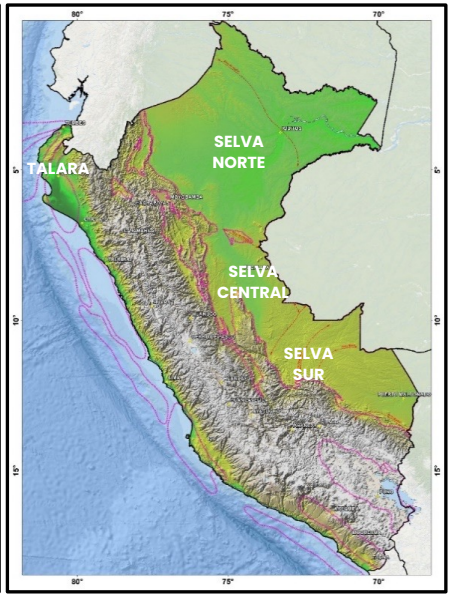
MINING AND ENERGY POTENTIAL IN PERU

SILVER, COPPER, ZINC, GOLD



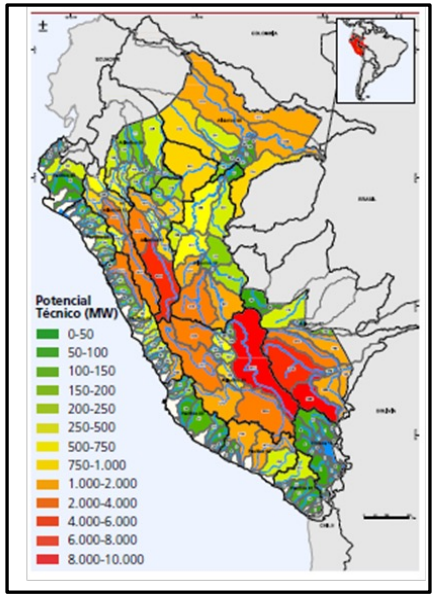
23 metallogenic bands. High geological-mining potential.

911 MMSTB – OIL + LGN* 11 TCF – GN*



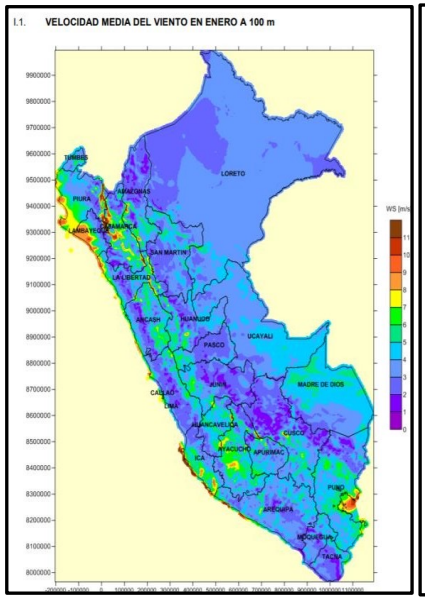
18 basins with exploration possibilities
31 underexplored and exploited blocks.

70 GW - HYDRO



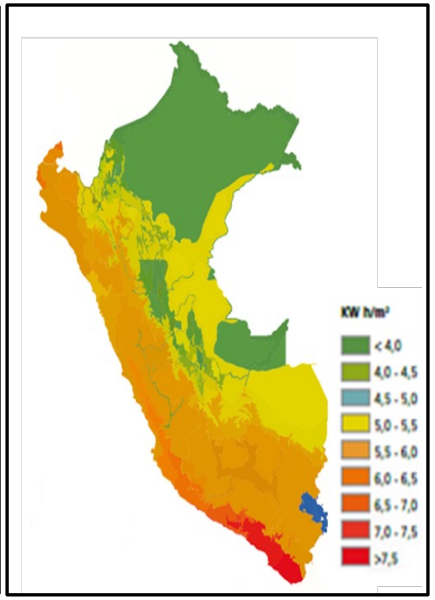
7% is used.

28 GW – WIND



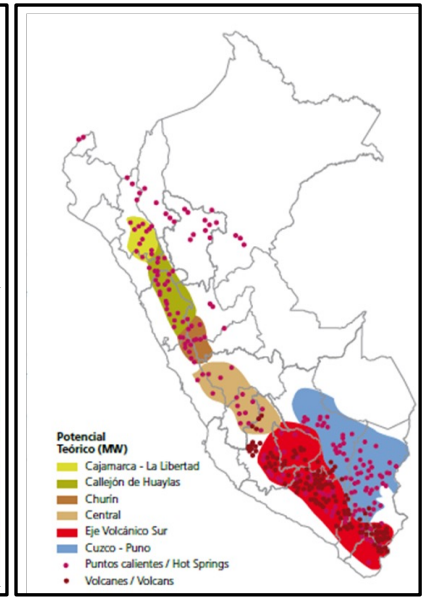
0.2% is used.
The greatest potential are: Lambayeque, Piura, Ica, Arequipa, Cajamarca, La Libertad.

937 GW- SOLAR



0.03% is used.
The greatest potential are: Arequipa, Moquegua and Tacna.

3 GW - GEOTHERMAL



It is not yet being exploited.
Areas with the greatest potential are Arequipa, Moquegua, Tacna and Ayacucho.

Source: Estimación Potencial Minero, INGEMET 2018; Libro de Reservas 2021; DGEE; DGE; MINEM.
**Reservas probadas + probables*

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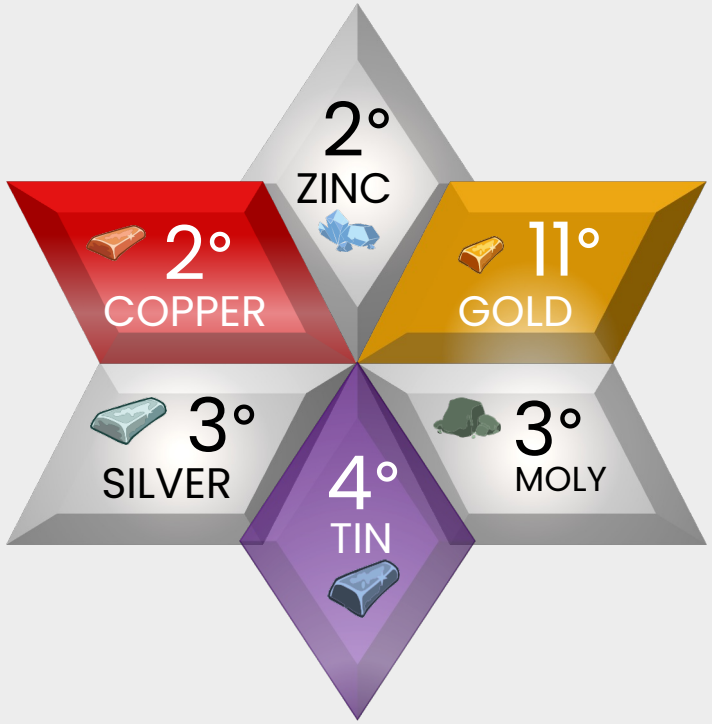
PERU's ROLE IN THE GLOBAL MINING

LEADER IN ORE RESERVES AND MINING PRODUCTION

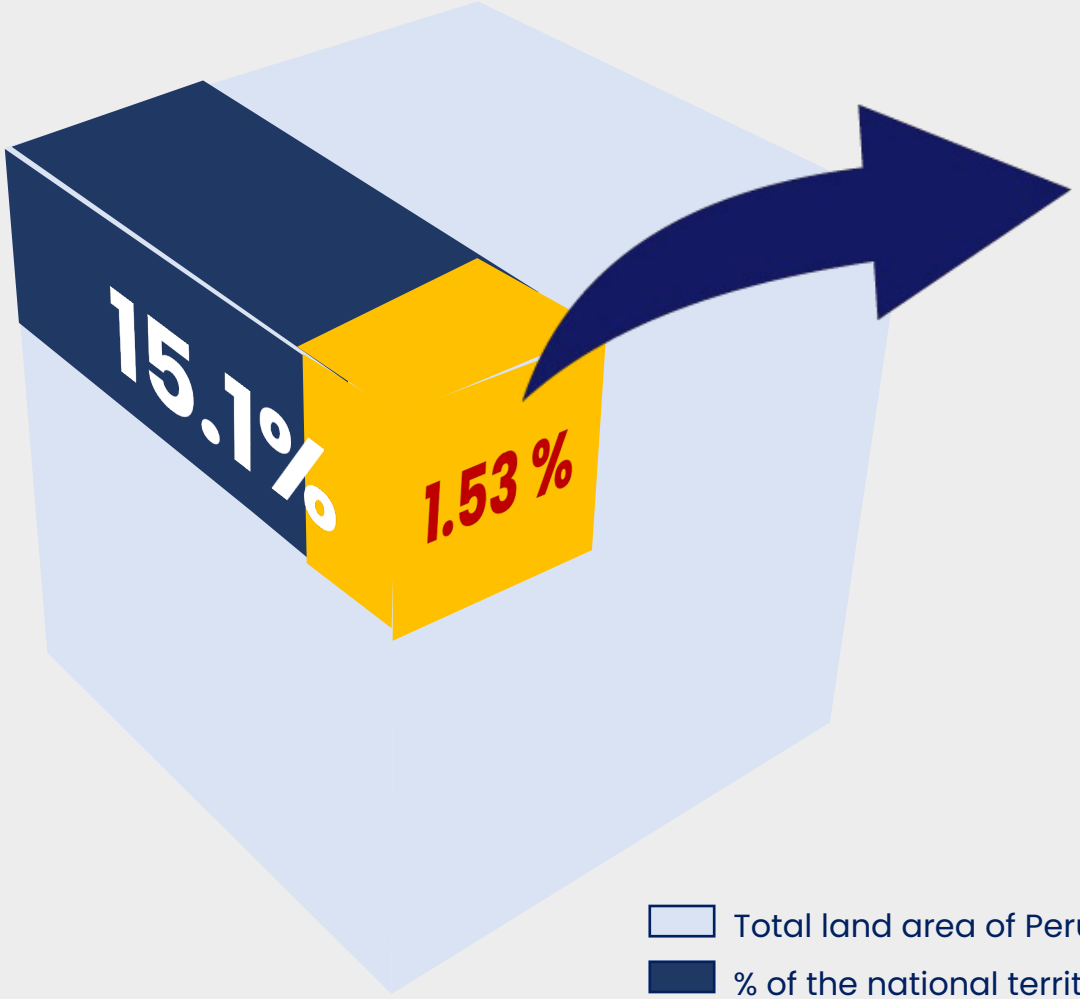
PERÚ: WORLD RANKING OF ORE RESERVES

PERÚ: WORLD RANKING OF MINING PRODUCTION



Source: U.S.Geological Survey (USGS), Mineral Commodity Summaries, January 2024

GEOLOGICAL POTENTIAL



Mining activities currently take place on just **1.53%** of the national territory, indicating significant potential for further exploration and exploitation.

Concessions	N°	Ha	% of the national territory
Exploration	342	344 766	0.27
Operation	708	1 623 471	1.26
Mining activity			1.53

**Data corresponding to June 2024, Mining Statistical Bulletin (BEM)*
Source: INGEMMET, Monthly Statistical Declaration (ESTAMIN) - Ministry of Energy and Mines.

- Total land area of Peru
- % of the national territory under mining concession
- % of the national territory where mining exploration and exploitation activities are carried out

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PERU AND THE GLOBAL ENERGY TRANSITION

CHALLENGES OF THE ENERGY TRANSITION

Increasing the supply of minerals

The supply of critical minerals is estimated to need to grow by 1.5 to 7 times by 2030 to achieve the "net zero" goals by 2050.

Climate change

Peru is committed to limiting global temperature rise to between 1.5°C and 2°C and striving to achieve net zero emissions by 2050.

Mapping new natural resource deposits

Known deposits are insufficient to meet the growing demand for minerals needed for clean energy.

Strategic Minerals are Guaranteed

The energy sector, along with industries such as defense, aerospace, and communications, will need to collaborate in managing their access to strategic minerals.

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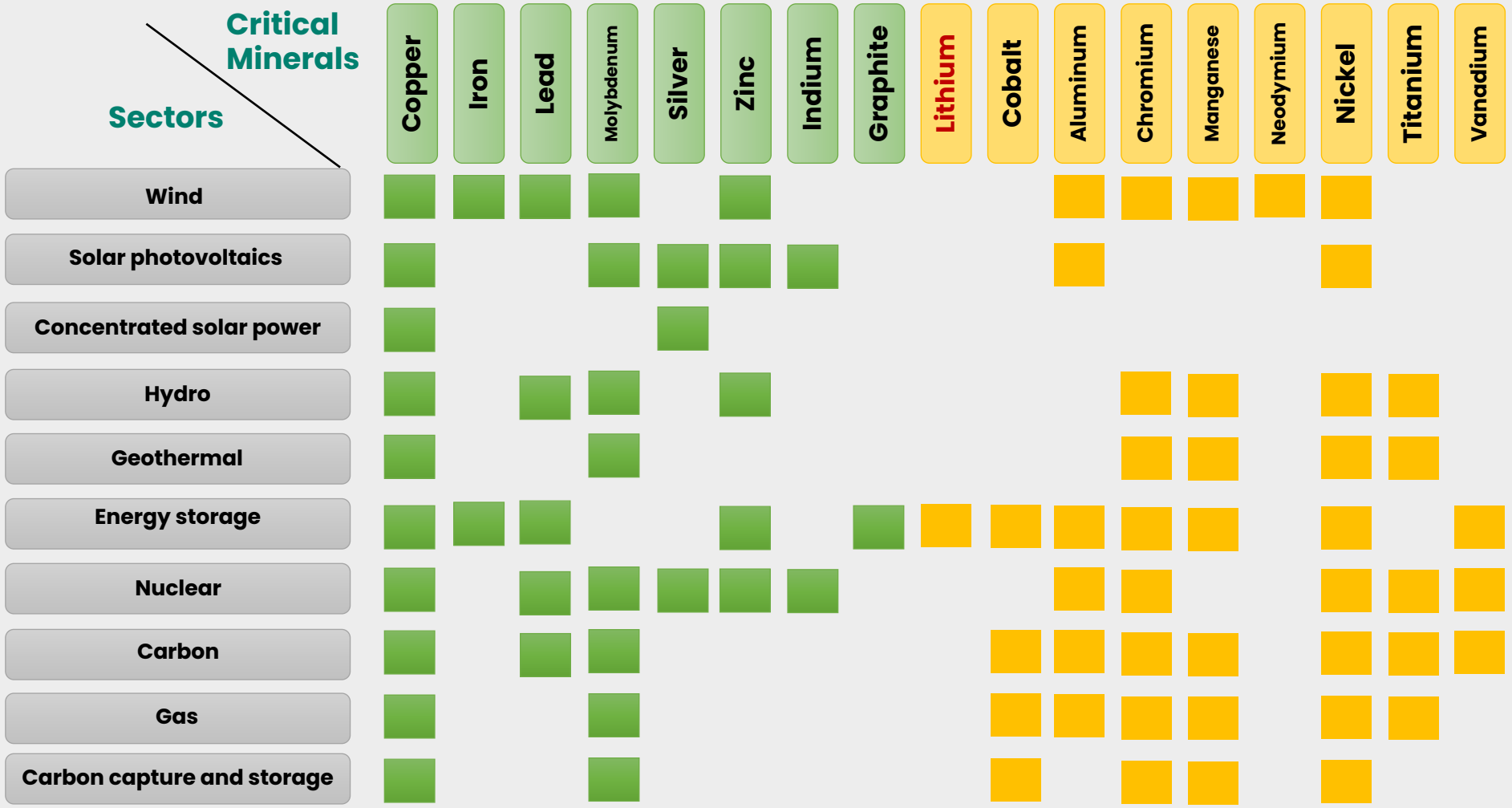
PERU HOLDS A STRATEGIC POSITION WITHIN THE ENERGY TRANSITION FRAMEWORK



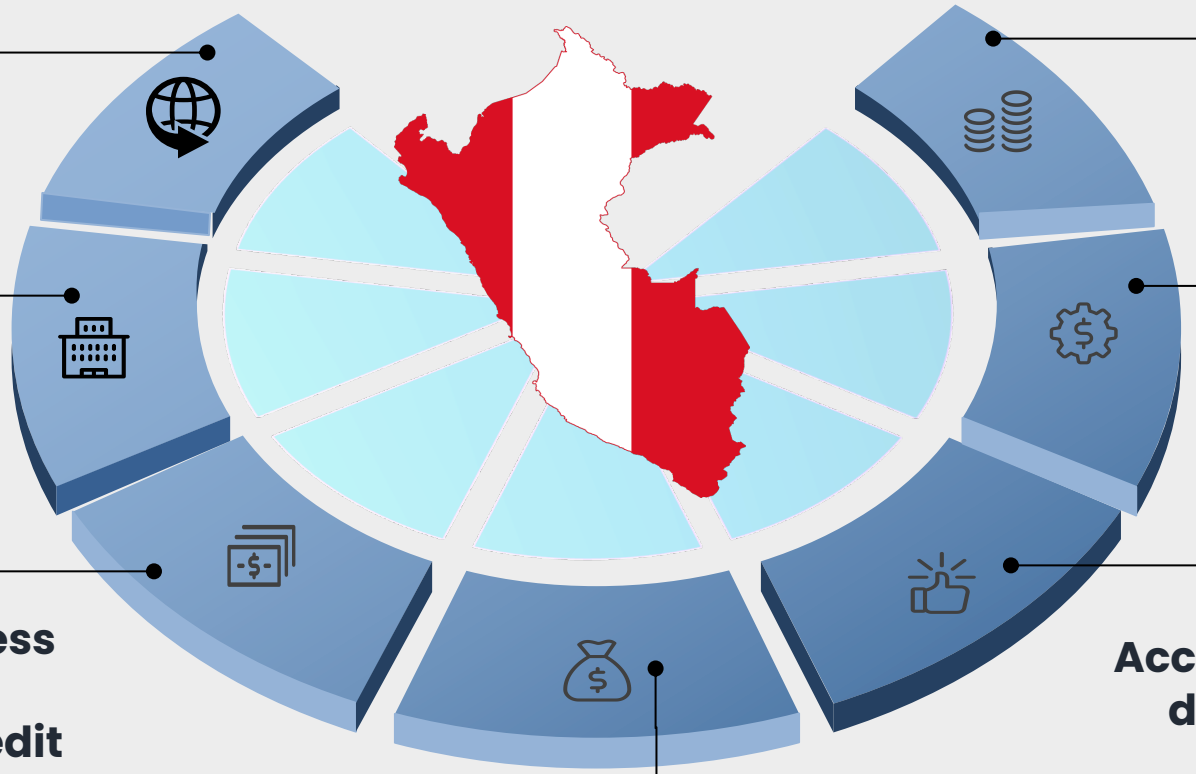
Peru produces 8 of the 17 strategic minerals essential for the energy transition

Exploited minerals in Peru

Unexploited minerals in Peru

Source: World Bank (2020) En Acosta (2022)

PERU: A ROBUST LEGAL FRAMEWORK FOR FOREIGN INVESTORS



Non-discriminatory treatment
Foreign investors receive the same treatment as national investors

Guarantee of Private Property / Free Competition

Freedom to access domestic and international credit

Freedom of Capital Transfer

Access to international dispute resolution mechanisms

Unrestricted access to most economic sectors*

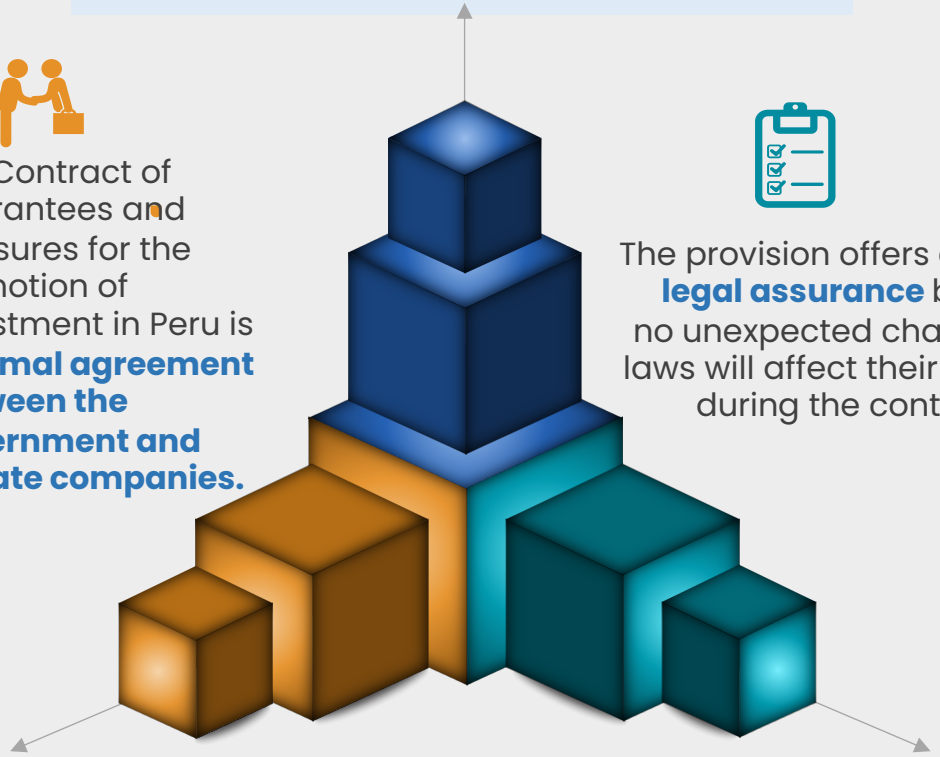
Freedom to acquire shares from nationals

** Investments that require authorization: Those located within 50 km of the border line and those aimed at weapons, ammunition and explosives. Likewise, a majority local partner is required for investments in maritime cabotage transport, as well as in air transport companies.*
Source: Agency for the Promotion of Private Investment - PROINVERSION.
Elaboration: General Directorate of Mining Promotion and Sustainability.

TRUST AND ADVANTAGES

TAX STABILITY

The Contract of Guarantees and Measures for the Promotion of Investment in Peru is **a formal agreement between the government and private companies.**



The provision offers companies **legal assurance** by ensuring no unexpected changes to tax laws will affect their operations during the contract's term.

It provides a robust **legal and fiscal framework** for a specified duration, encouraging investment and fostering economic growth.

VAT REFUNDS

During the exploration phase, **VAT refunds** are provided to holders of mining activities.

REFUND UP TO 18% (VAT)

Mining regulation aims to encourage increased exploration and facilitate the development of new investment projects.

The **National Mining Policy** is currently under further development and expansion.

Source: TUO of the LGM, approved by D.S N°014-90-EM, Law N°30230 and Law N°30296.

NATIONAL MINING POLICY

The National Mining Policy for 2050 aims to prioritize both competitiveness and sustainability in the use of mining resources.

Objective

We strive for the sustainable development and competitiveness of mining operations, along with the responsible utilization of mineral resources for the greater good.

Progress

Policy relevance analysis leads to the feasibility recommendation from the National Strategic Planning Center.

Articulation

The National Multisectoral Mining Policy for 2050 is currently in the formulation stage. Additionally, a Multisectoral Working Group will be established to contribute to its development.

Sustainability

Competitiveness

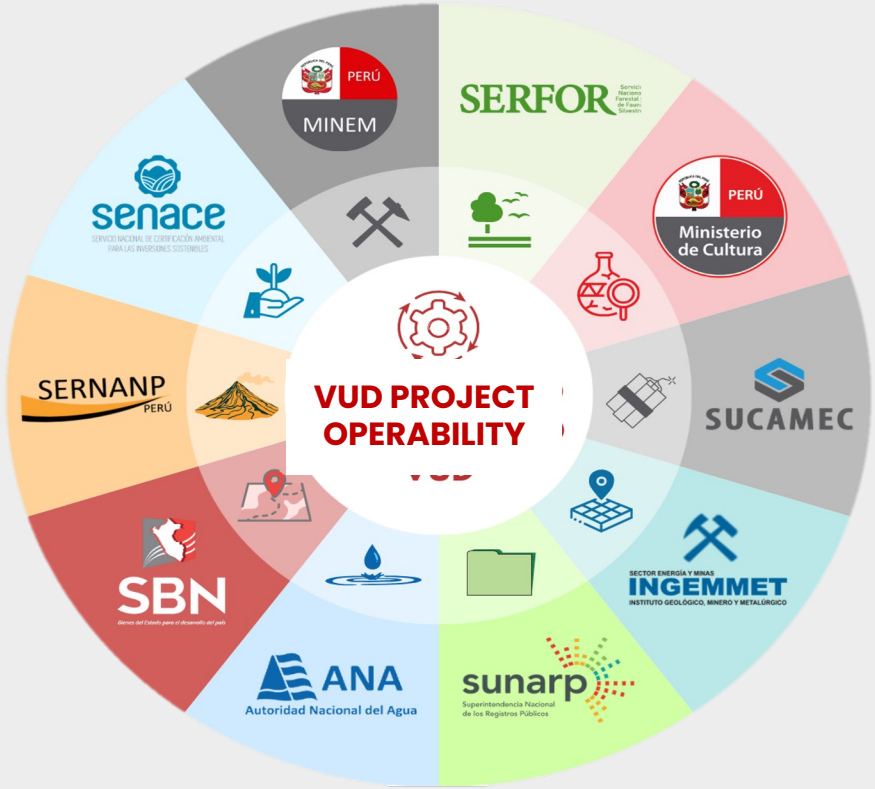
TO PROMOTE INVESTMENTS

VUD

Interconnectivity to optimize authorization procedures

Main entities added to digital one-stop shop for the mining sector

10 public entities that facilitate administrative simplification **under the guidance of MINEM.**



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PORTFOLIO OF HYDROCARBON INVESTMENT PROJECTS

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PROSPECTIVE AREAS OF EXPLORATION OF HYDROCARBONS

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PROSPECTIVE RESOURCES TUMBES-TALARA BASINS

Total : 3,880 MMSTB y 7.6 TCF

Technical Evaluation Agreement (Signed): 4

PROSPECTIVE RESOURCES TRUJILLO – SALAVERRY BASIN

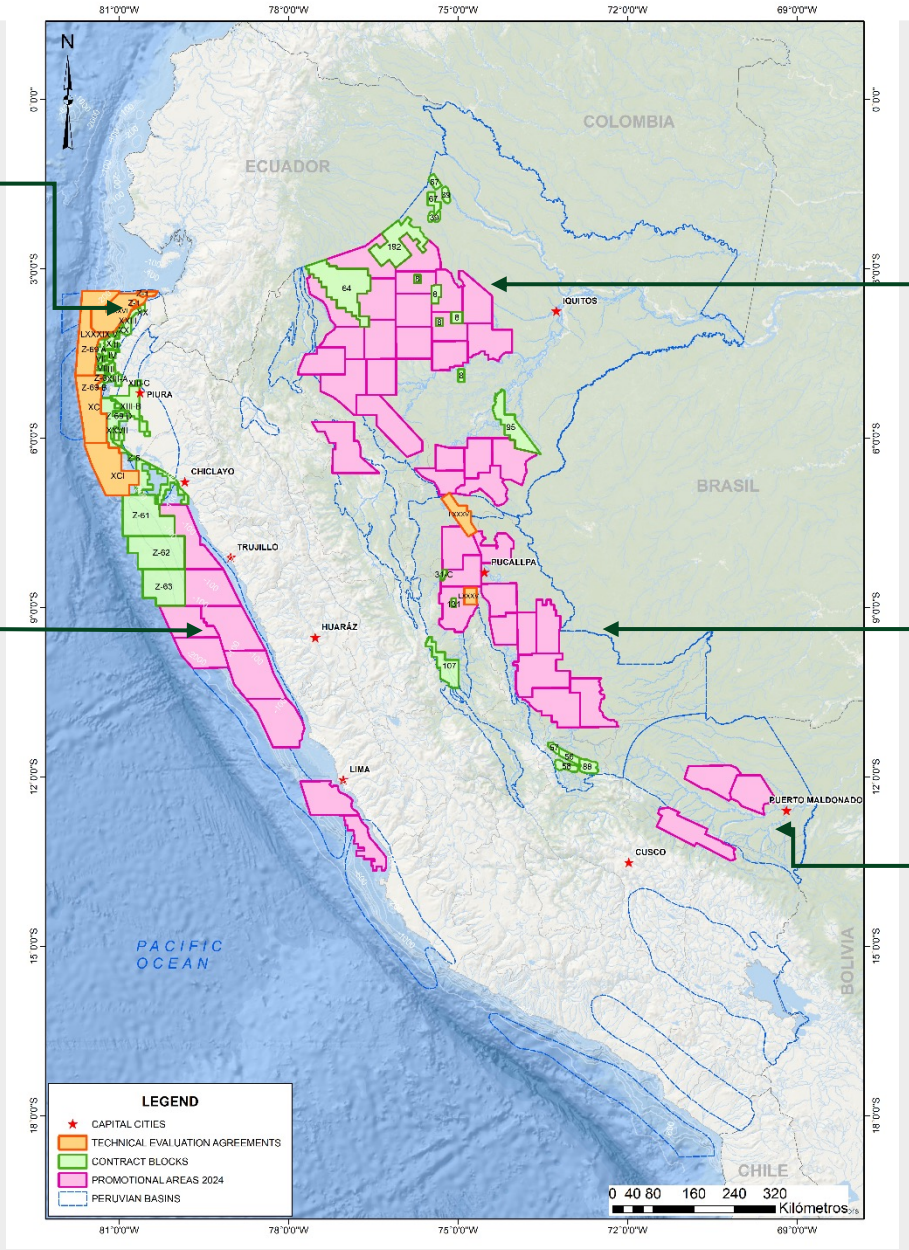
Total : 647 MMSTB

Promotional Areas : 7

PROSPECTIVE RESOURCES PISCO BASIN

Total : 910 MMSTB

Promotional Areas : 2



PROSPECTIVE RESOURCES MARAÑÓN – HUALLAGA BASINS

Total : + 5,000 MMSTB

Promocional Areas: 24

PROSPECTIVE RESOURCES UCAYALI BASIN

Total : +8,000 MMSTB + 1 TCF

Promocional Areas : 11

(Signed): 2

PROSPECTIVE RESOURCES MADRE DE DIOS BASIN

Total : 8.66 TCF

+ 155.56 MMSTB (Condensate)

Promocional Areas: 3

PROSPECTIVE RESOURCES:

18,437 MMSTB (Oil)

17.26 TCF (Natural Gas)

155.6 MMSTB (LGN)

Source: Perupetro

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PETROCHEMICAL INDUSTRY

Petrochemical Project: Metano Fertilizer/Explosive Plant

- **Gas Conmsumption:** 100-150 MMPCD
- **Capacity of Production:** 1,2 MM ton/año UREA
- **Investment:** **1,200 - 1,500 MMUSD**
- **Time to operate:** **3** years*

(*) without EIA

ENV & SOCIAL IMPACTS

- Stimulates key economic activities in the country, such as agriculture, mining, and energy.
- Generates investment and reduces dependence on imports.
- Mitigates food safety risks with long-term coverage.
- Promotes the massification of natural gas and industrial development.
- Contributes to the fulfilment of international commitments (SDG, Paris Agreement, etc.)

INTEGRATED NATURAL GAS TRANSPORTATION SYSTEM PROJECT FOR THE SOUTHERN OF PERU

4,320
USD million invested

SELECTED ALTERNATIVE
in Stage 1 based on the highest Social Profitability, which is a function of the cost of the service

- **Ensure a secure supply of natural gas (NG)** and natural gas liquids (NGL) to users of the National Integrated Energy System (SEIN) and other users.
- **Deliver NG and NGL to major cities** including Cusco, Apurímac, Puno, Arequipa, Moquegua, and Tacna, as well as to the "Southern Energy Node of Peru" in Mollendo and Ilo.

Proinversión: Stage 2 of SITGAS Project Study

- MINEM has instructed *Proinversión* to proceed with Stage 2 to verify feasibility requirements.
- Budget: S/ 26,434,681 for hiring a technical consultant.
- Publications: In November 2023 and April 2024, *Proinversión* published a Request for Expression of Interest in the Official Gazette *El Peruano*, *Gestión, and Seminario Económico* for consulting services. No companies met the requirements.
- Current Status: *Proinversión* is now working with a multilateral entity to hire consulting services for Stage 2 of the pre-investment study.

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PORTFOLIO OF MINING INVESTMENT PROJECTS

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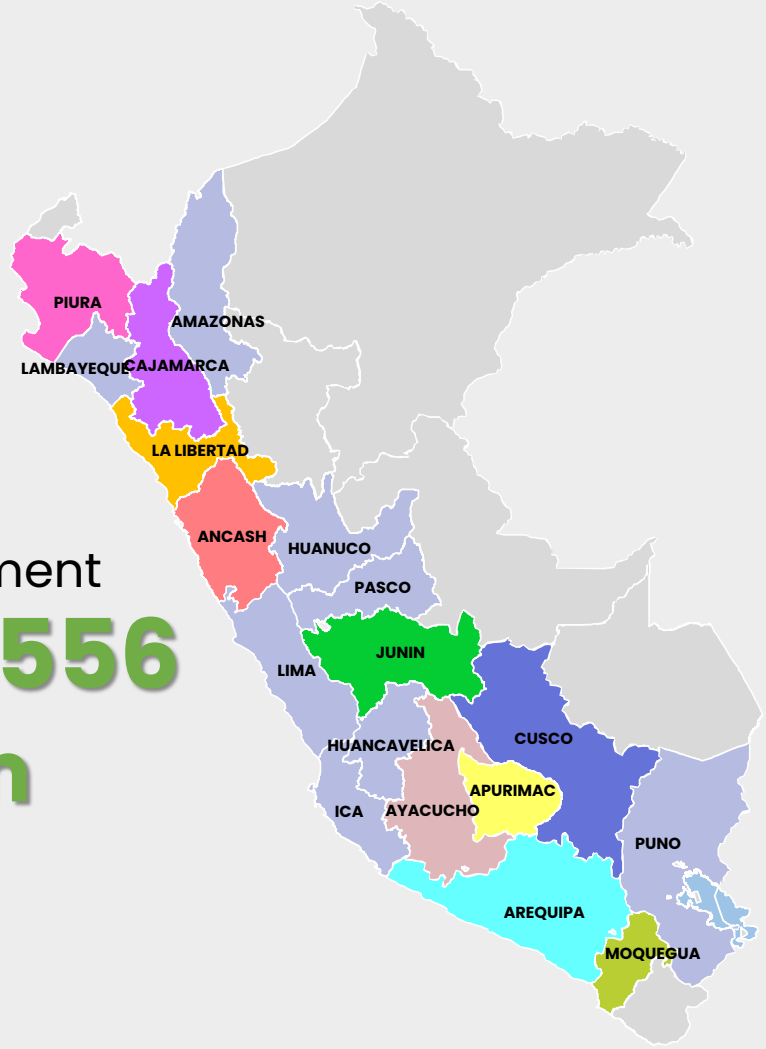
2024 MINING INVESTMENT PROJECTS PORTFOLIO

51
projects

Total investment
US$ 54 556 million



Ranking of Peruvian regions

by accumulated investments in Project Portfolio (US$ million)

Nº projects		
7	Cajamarca	16,425
8	Apurımac	12,017
4	Arequipa	5,044
4	Moquegua	3,350
2	Piura	3,242
6	Ancash	3,234
2	Cusco	2,790
1	La Libertad	1,364
1	Ayacucho	1,319
3	Junın	1,046
13	Otros	4,725

Main projects

Zafranal (US$ 1263 million)
Int. Corocohuayco (US$ 1500 million)
Los Chancas (US$ 2600 million)
Michiquillay (US$ 2500 million)
Yanacocha Sulfides (US$ 2500 million)
Hierro Apurimac (US$2900 million)

Publication date: March 2024
Source: Portfolio of Mining Investment Projects 2024. Ministry of Energy and Mines (MINEM).

PORTFOLIO OF MINING INVESTMENT PROJECTS

According to country of origin of the main investor

Ranking of the top 5 investing countries

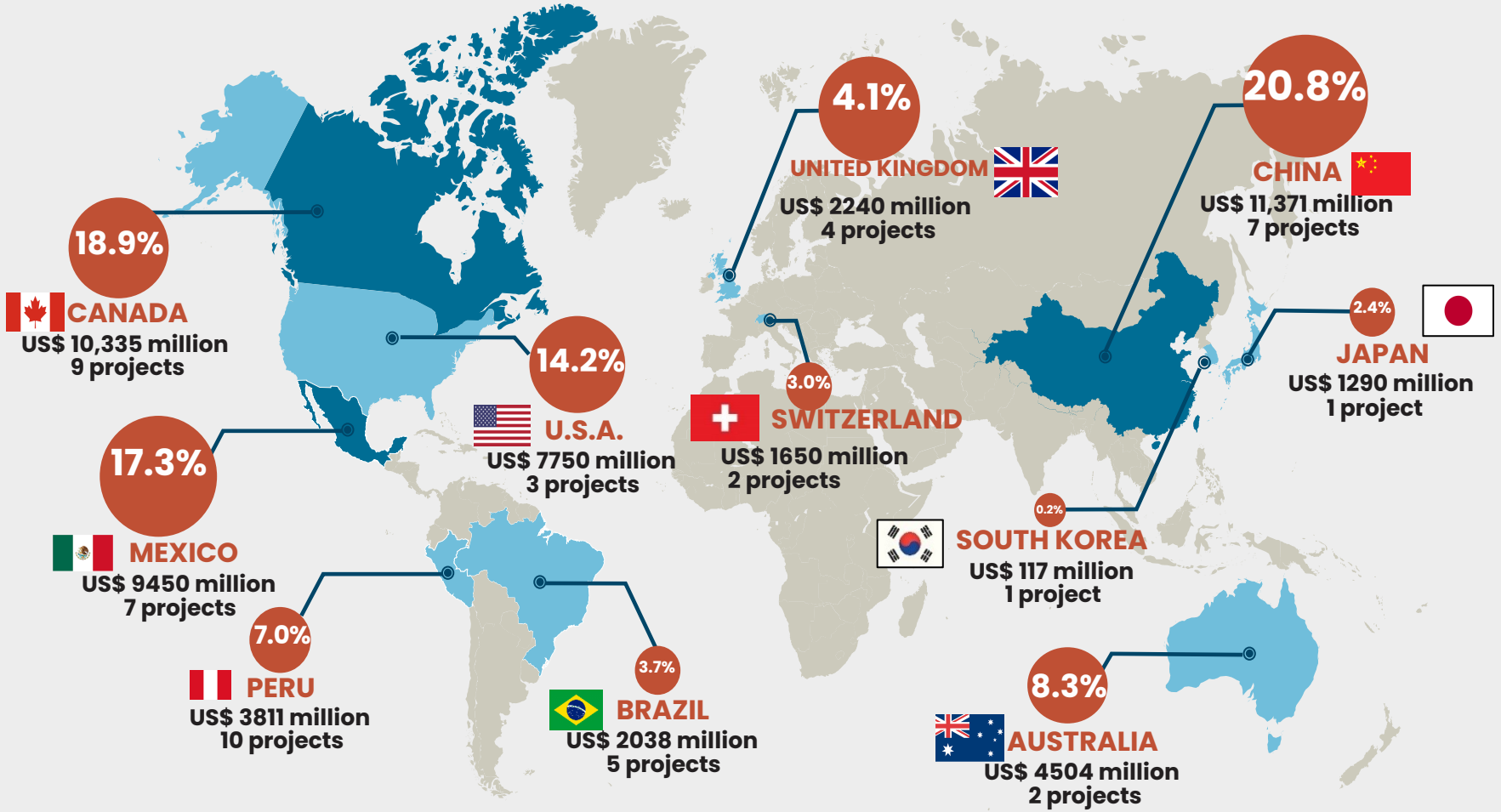
1° China

2° Canada

3° Mexico

4° United States

5° Australia



Source: Portfolio of Mining Investment Projects 2024. Ministry of Energy and Mines (MINEM).

TYPE OF ORE TO BE EXTRACTED

COPPER

73%

US$ 39 795 million

31 projects

Ampliación Cuajone, Ampliación Ilo, Ampliación Toromocho (Fase II), Antilla, Ariana, Cañariaco, Chalcobamba Fase I, Coimolache Sulfuros, Cotabambas, Don Javier, El Galeno, Haquira, Integración Coroccohuayco, La Arena II, La Granja, Los Calatos, Los Chancas, Magistral, Michiquillay, Mina Justa Subterránea, Planta de Cobre Rio Seco, Pukaqaqa, Quechua, Reposicion Antamina, Reposicion Colquijirca, Reposicion Ferrobamba, Rio Blanco, Tia Maria, Trapiche, Yanacocha Sulfuros y Zafranal.

GOLD

13%

US$ 6842 million

5 projects

Conga, Ollachea, Reposicion Inmaculada, Reposicion Tantahuatay y San Gabriel.

IRON ORE

9%

US$ 4681 million

2 projects

Hierro Apurimac y Pampa de Pongo.

ZINC

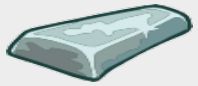
3%

US$ 1842 million

8 projects

Ampliacion Huancapeti, Ampliacion Pachapaqui, Ayawilca, Cañon Florida, Hilarion, Reposicion Raura, Romina y Shalipayco.

SILVER



2%

US$ 946 million

4 projects

Ampliacion Huachocolpa, Corani, San Luis y Yumpag

PHOSPHATE

1%

US$ 450 million

1 project

Ampliacion Bayovar

Publication date: March 2024
Source: Portfolio of Mining Investment Projects 2024. Ministry of Energy and Mines (MINEM).

KEY METALS FOR THE TRANSITION TO CLEAN ENERGY IN THE COMING YEARS

- McKinsey & Co. joined the growing chorus of warnings that metals considered key to the clean energy transition will face shortages in the coming years, which could suppress the adoption of electric cars, wind turbines and solar panels.
- These shortfalls are likely to slow global decarbonization efforts by increasing supply chain costs and, consequently, prices for lower-carbon products.
- Nickel, needed for lithium-ion batteries that power electric vehicles, is expected to face a shortage of around 10% to 20% by 2030
- While dysprosium, a rare earth element commonly used in electric motors , may experience deficits of up to 70%,
- Copper, lithium, cobalt, iridium and tin supplies can also be crimped. Metals worth US$6 trillion are needed for the global energy transition.

MORE RESOURCES

- The number of the roughly 500 cobalt, copper, lithium and nickel mines operating today will need to increase by as much as 76% to nearly 900 to meet battery demand
- Material shortages would lead to an additional 400 to 600 million tons of greenhouse gas emissions in 2030
- That would derail international plans to limit global temperatures as laid out in the Paris climate agreement.
- McKinsey recommends that investments in mining, refining and smelting increase to between US$3 trillion and US$4 trillion by 2030, a 50% annual increase compared to the previous decade.

Source: DF

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COPPER PROJECTS IN THE MINING INVESTMENT PORTFOLIO

COPPER PROJECTS

31 projects

Mining Investment

US$ 39 795 million

14 Regions

Source: Portfolio of Mining Investment Projects 2024. Ministry of Energy and Mines (MINEM).

PERU'S STRATEGIC COPPER RESERVES

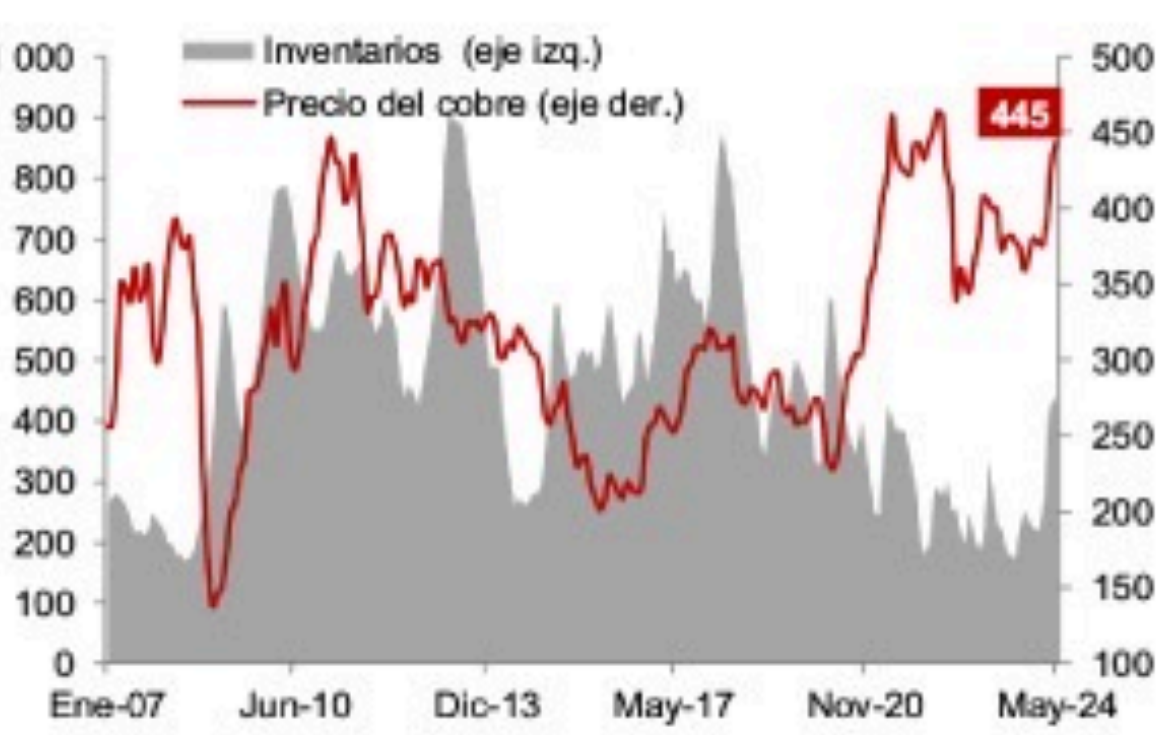
- **Key Mineral Reserves:** Peru holds significant reserves of minerals crucial for the energy transition.
- **Copper Reserves:** Peru is in a privileged position with large copper reserves, accounting for 11% of global reserves. Copper is essential for the ongoing global energy transition.
- **Market Demand vs. Projects:** Current global demand for minerals surpasses the number of projects available. Peru's substantial mining portfolio is critical to capitalize on this demand.

PERU'S STRATEGIC COPPER RESERVES

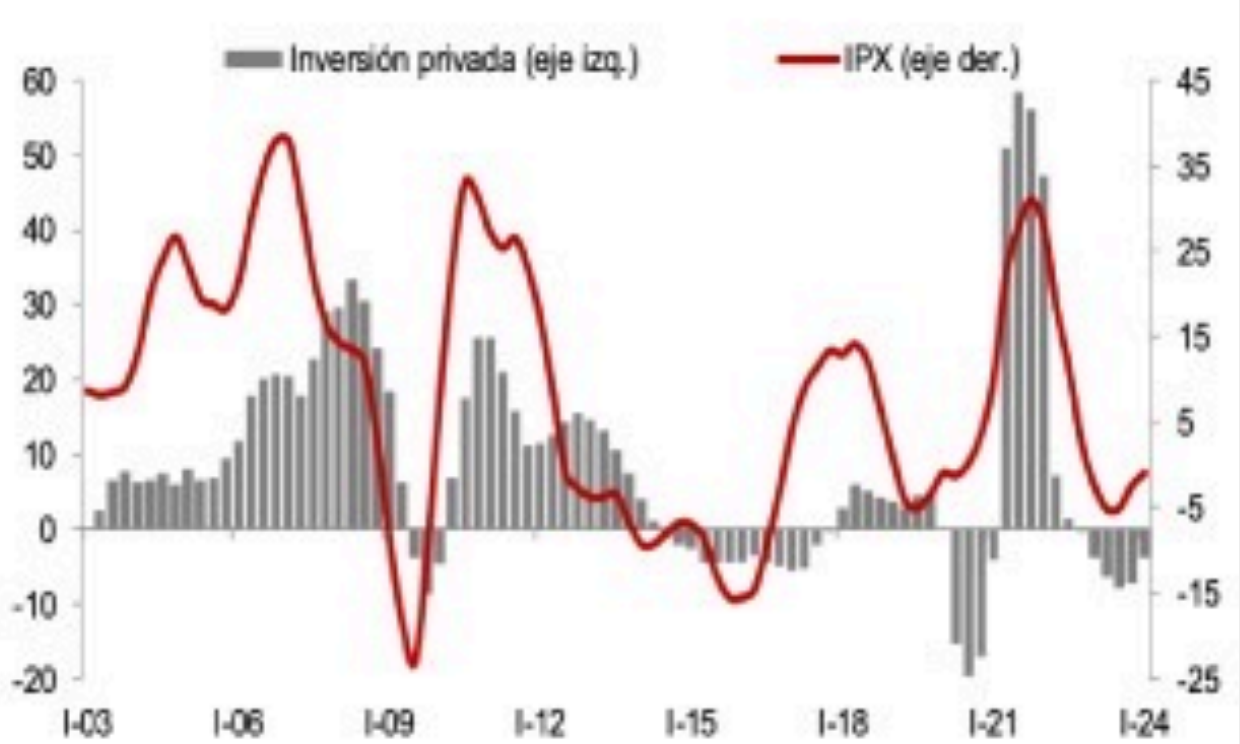
- **Copper's Market Impact:** As electrification, renewable energies, and artificial intelligence drive the future, copper is poised to dominate the commodities market.
- **Historic Prices:** Copper recently achieved a historic price, surpassing $11,000 per ton as of May 20, 2024.
- **Future Outlook:** Demand for copper is expected to rise further with the growth of data processing centers and the recovery of the Chinese economy.
- **Copper as the New Oil:** In the context of climate change, copper is becoming a fundamental mineral, often compared to oil, for its role in transforming energy systems.

INVENTORIES, COPPER PRICE AND PRIVATE INVESTMENT

Global inventories and average price of copper[1] (Thousands of tons and Cus$/lb.)



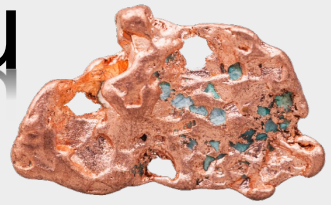
Private investment and IPX[2] (Annual real % change; 4Q Mobile avg.)

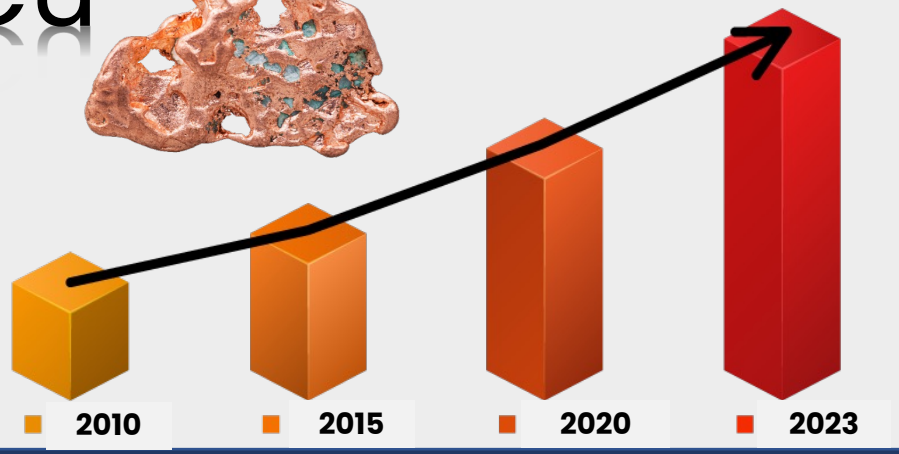


Source: Bloomberg, BCRP

MINING PRODUCTION PROJECTION

Cu

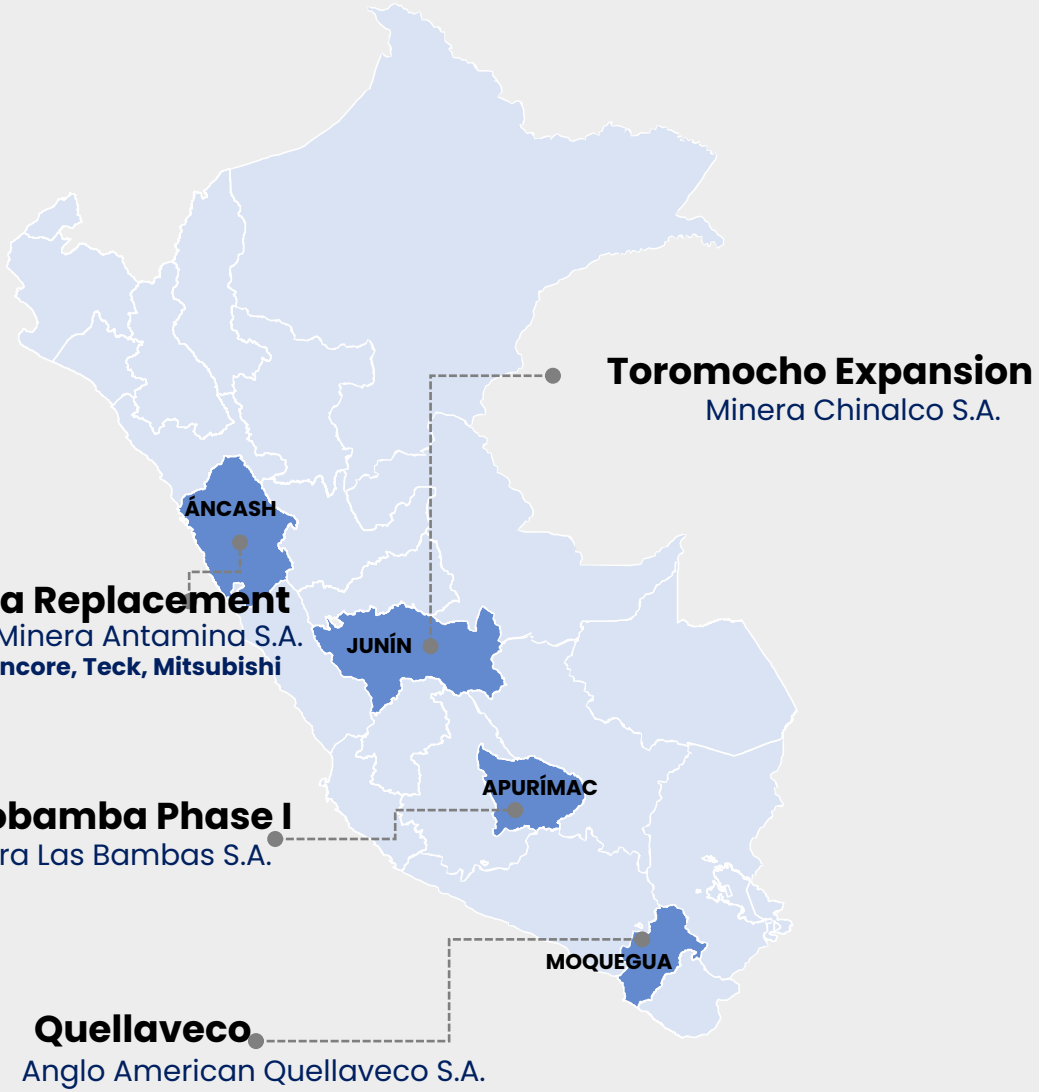




PERU LEADS COPPER PRODUCTION

Peru is recognized as **the second largest copper producer** in the world.

By 2023, domestic copper production will reach **2.8 million FMT**, as a result of the start-up of projects such as:



Source: Monthly Statistical Statement (ESTAMIN) and Portfolio Mining Investment Projects 2024 - Ministry of Energy and Mines (MINEM).
Elaboration: General Directorate of Mining Promotion and Sustainability.
FMT: Fine Metric Tons.

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PORTFOLIO OF MINING EXPLORATION PROJECTS

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PORTFOLIO OF MINING EXPLORATION PROJECTS 2024

75 projects

Total mining investment

US$ 644 million

Ranking of Peruvian regions

by amount of investment accumulated in projects (US$ million)

Nº projects		
2	La Libertad	120
4	Pasco	86
12	Ancash	83
11	Arequipa	59
4	Lima	45
6	Puno	40
7	Apurimac	40
5	Moquegua	39
3	Cusco	28
3	Ica	21
18	Otros	83

Source: Portfolio of Mining Exploration Project 2024.

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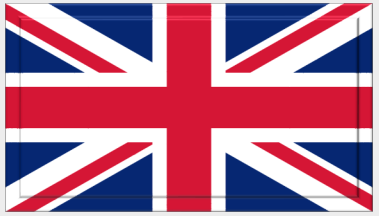
PORTFOLIO OF MINING EXPLORATION PROJECTS 2024

Ranking of the top 5 investing countries

1° 

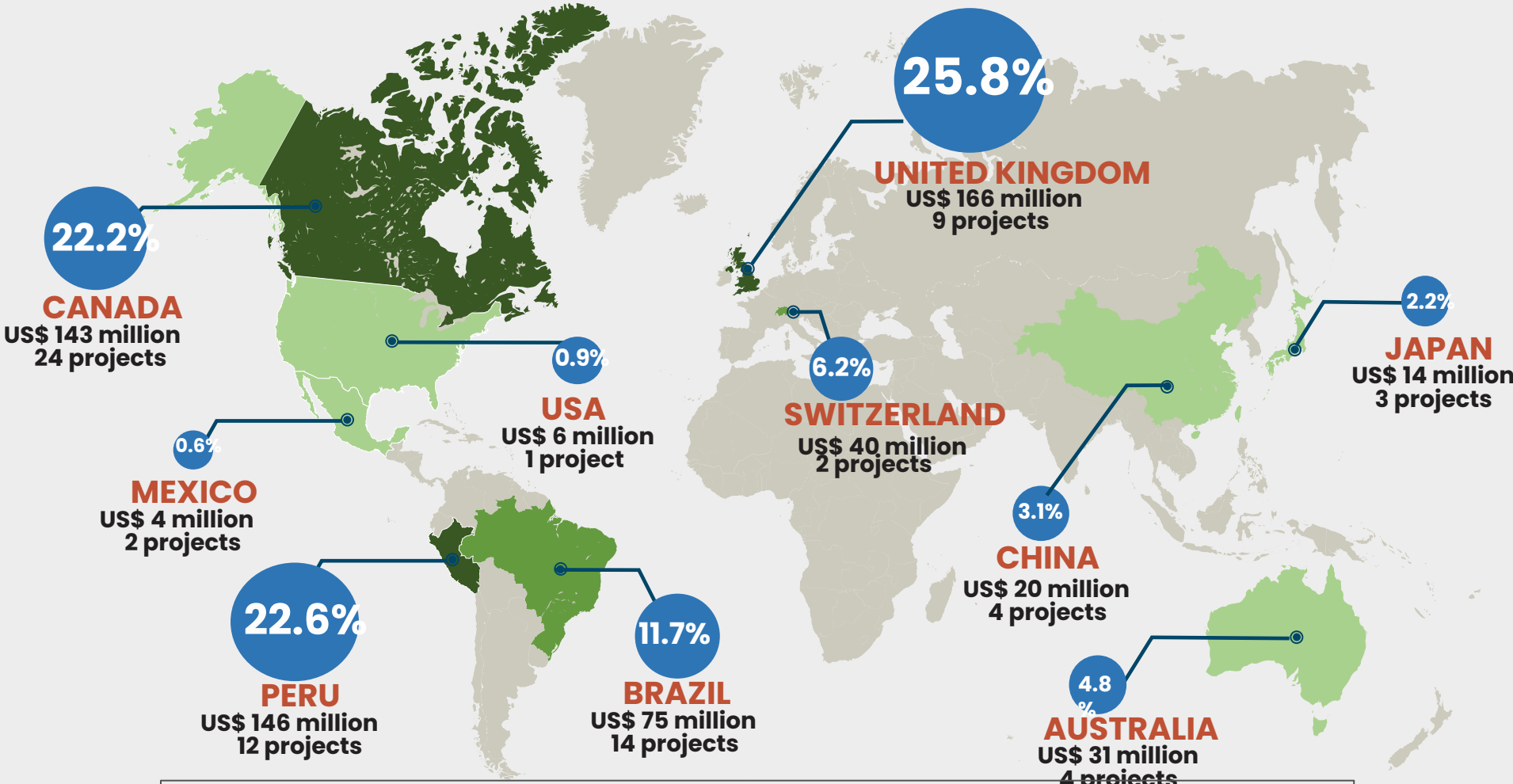
2° 

3° 

4° 

5° 

Main investors in exploration projects in Peru



Source: Portfolio of Mining Exploration Project 2024.

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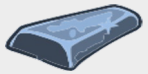
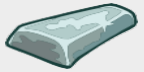
INVESTMENT IN MINE EXPLORATION PROJECTS ACCORDING TO THE MAIN ORE TO BE EXTRACTED

COPPER	GOLD	ZINC	SILVER	LITHIUM	IRON ORE	NIQUEL	LEAD
							
39.4 %	29.6 %	13.1%	11.6%	3.2%	2.0%	0.6%	0.6%
US$ 254 million	US$ 191 million	US$ 84 million	US$ 75 million	US$ 21 million	US$ 13 million	US$ 4 million	US$ 4 million
Antamayo, Antapata, Antarumi, Atravesado, Azulccacca, Bordebamba, Candelaria, Chacapampa, Chaska, Corvinon, El Carmen, Esperanza, Huarangayoc, Huatana, Huilacollo, Jasperoide, Los Chapitos, Mara, Maria Cecilia Dos, Maria Reyna, Mónica Lourdes, Oasis, Pampa Esperanza, Paraiso, Picha, Pucajirca, Pucasalla, Qanqawa, Qoya – Chullo, Quellopunta, Quicay II, Quimsachata, Sallahue Norte, San Martin, Silvia, Soledad, Sumac Wayra, Umami, Valiente, Willay.	Colorado, Coloso, Colpayoc, Gaban; Grace 10, Surapata y Amparo; La Zanja, Las Defensas, Miscanthus, Palca, Pinaya, Tambomayo, Usicayos.	Atalaya, Azulmina, Carhuacayan, El Padrino, Lezard, Los Perdidos II, Patacancha, Romina 2, Sara.	Berenguela, Caylloma, Condorillo, Crespo II, Curibaya, Dorita, Tassa, Yumpag-Carama.	Falchani y Quelcaya	Achatayhua, C.P.S. N° 1	Nikolauz	Alpamarca

Source: Mining Exploration Projects Portfolio 2024

PERÚ Ministerio de Energía y Minas

Ponle PUNCHE y ganamos todos PERÚ

THANK YOU