



MINISTRY OF MINING  
AND HEAVY INDUSTRY



MONGOLIAN NATIONAL  
MINING ASSOCIATION

# MONGOLIA

## MINERALS AND MINING INVESTMENT GUIDE 2022-2023



# GREETINGS

## Minister of Mining and Heavy Industry

On behalf of the Government of Mongolia, I extend my sincerest gratitude to all interested parties and investors from around the world. Our country occupies a strategic location at the heart of Asia, connecting Southeast Asia with Central Asia and Europe. This geographical advantage is not only strategically important but also economically valuable, as we are neighboring with world's largest consumers. We possess abundant natural resources and a wealth of unexplored minerals, which presents significant opportunities for exploration and development.

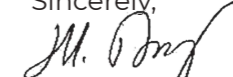
As the Minister of Mining and Heavy Industry, it is an honor to introduce our minerals potential and active mining projects. The Government of Mongolia is committed to fostering a long-term and stable investment-friendly environment for the minerals sector. Through transparent and responsible mining practices, improved logistics, infrastructure, and refining processes, we aim to give our mineral products a competitive advantage in the global market.

In terms of the legal environment, the Parliament of Mongolia recently passed the "Mining Commodity Exchange Law," which will take effect on July 1st, 2023. Additionally, we have drafted laws for the Land, Minerals, Heavy Industry, and Sovereign Development Fund to further support the minerals sector and align with international best practices. We are committed to creating a predictable, stable, and transparent legal environment that is aligned with internationally recognized ESG principles to attract more investment into our country.

Our Ministry prioritizes policies that support internationally recognized Environment-Society-Governance principles to protect and support the interests of investors. Despite the current challenges faced by countries due to the pandemic, such as logistical difficulties, economic crisis, and complicated international relations, we believe that the transitional period will lead to an increase in commodity prices and demand, and the world economy will recover.

I take this opportunity to introduce you to the current state of the Mongolian minerals sector, the transparent, investment-friendly, and predictable legal environment, and the mega-projects currently under development. I wish you all the best in your conference activities and look forward to exploring potential opportunities for collaboration and investment in our country.

Sincerely,



GANBAATAR Jambal  
Member of the Parliament of Mongolia,  
Minister for Ministry of Mining and  
Heavy Industry

## Outline

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# Mongolia

# 1

## Background Information

One of the world's fastest-growing economies, holding a massive wealth of mineral resources. With an outward-looking professional business community, democratic government and rapidly improving living conditions, many international investors are turning their attention to Mongolia. Landlocked

between Russia and China, Mongolia is a country of extremes. Despite the different climate types, thin populations, and large territory within Asia, the cosmopolitan atmosphere of central Ulaanbaatar contrasts with the isolated existences of smaller communities.

### MONGOLIA AT A GLANCE

 **3.4** million



**5.8%** GDP Forecast 2023



**Ulaanbaatar**  
Capital

### TOP EXPORTS 2022/IV

Coal Briquettes  
**\$11.5 billion**

Copper Ore  
**\$2.2 billion**

### TOP IMPORTS 2022/IV

Refined Petroleum  
**\$1.2 billion**

Cars  
**\$960 billion**

### KEY TRADE PARTNERS BY DESTINATIONS

China		82.5%
Europe		14%
Others		3.5%

**SOURCE:** National Statistics Office of Mongolia, General Authority of Customs of Mongolia

## Our strength

### Managing Stakeholders Interests

- ▶ Synergy between government institutions
- ▶ Capacity building program
- ▶ Social program to promote a positive impact of FDI

### Diversification

- ▶ Sector diversification
- ▶ Geographical diversification
- ▶ Source country diversification

### More Favorable Condition

- ▶ Reduced procedural barriers
- ▶ Incentives
- ▶ Financial Incentives
- ▶ Fiscal Incentives
- ▶ Regulatory Incentives

### Protection

- ▶ One stop services
- ▶ Aftercare services
- ▶ Grievance management mechanism

### Open Entry to the Market

- ▶ No Approval needed to enter into market and buy a local company
- ▶ No Discrimination between Foreign and Local Investors
- ▶ Fast Registration Process for establishing new entity
- ▶ Open for investment in any industry or sector without limitation or government approval

### Guarantees for Investors

- ▶ No-Expropriation
- ▶ Intellectual Property Protection
- ▶ Free Repatriation
- ▶ Choice for Dispute Settlement
- ▶ Tax stabilization

### ECONOMIC FREEDOM INDEX 2022

Mongolia is the 66<sup>th</sup> freest country out of 180

	Mongolia
Business Freedom	66.5 ▲
Trade Freedom	74.4 ▼
Investment Freedom	50.0 -

Mongolia's economic freedom score is 63.9, making its economy the 66th freest in the 2022 Index. Mongolia is ranked 12th among 39 countries in the Asia-Pacific region, and its overall score is above the regional and world averages.

Mongolia's economy gathered steam in 2017 and 2018, slowed in 2019, and turned negative in 2020. Growth resumed in 2021. Economic freedom has improved during the past half-decade. Boosted by substantial score increases for fiscal health and judicial effectiveness, Mongolia has recorded an impressive 9.1-point overall gain of economic freedom since 2017 and has retained its position in the lower half of the "Moderately Free" category for two consecutive years. **Source:** Economic Freedom Index Mongolia 2022, Heritage Foundation

The ease of doing business index in an index created by the World Bank Group. Mongolia ranked 81 among 190 economies in the ease of doing business in 2020.

### MONGOLIA IMPROVED IN DOING BUSINESS 2022, RANKED 81

Indicator	Doing business 2020 rank
Protecting investor	25
Starting a business	100
Registering property	50
Getting credit	25
Paying taxes	71

**Source:** Doing business Mongolia 2022, World Bank

## Investment environment

Mongolia constantly proves itself to be in a global market. Mongolia is persistently discussing entering bilateral and multilateral agreements and actively participates in the process of regional integration. Until this day, Mongolia has established Foreign Investment Protection and Promotion Agreements with 43 countries and Double Taxation treaties with 26 countries. Moreover, Mongolia is a member of the Seoul Convention establishing the Multilateral Investment Guarantee Agency and the Washington Convention on the Settlement of Investment Disputes. Consequently, in April 2014, Mongolia introduced its investment policy and the law to UN Conference on Trade and Development /UNCTAD/ released "Mongolian Foreign Investment Policy Review". The overall feedback was positive, followed by recommendations and suggestions for the Government of Mongolia. The main concern that UNCTAD was having was a resource curse, followed which the recommendations were made. Firstly, to avoid macroeconomic instability, the Government of Mongolia must determine new objectives and tools for a comprehensive Foreign Trade Investment strategy. Secondly, new regulatory and institutional reforms are necessary for foreign and local private sector development. And lastly, Mongolia should develop programs for achieving diversification through Foreign Direct Investment (FDI) and other activities of foreign companies. Following in September 2014, the second review of Mongolia's trade policies and practices took place, where the basis for the review was a report by the World Trade Organization Secretariat and the Government of Mongolia. The reviews were similar to the UNCTAD's, which again reinforced the importance of establishing a comprehensive FDI strategy. In the year of 2015, Mongolia completed the Mongolia-Japan Economic Partnership Agreement /EPA/ negotiations, which became the FDI of Mongolia. As with any other EPA

agreement, Mongolia- Japan EPA has created an open door to both markets, which eventually increases the competitive index of Mongolia and the FDI with the increase of import and export between the two countries. Therefore, Mongolia has made another step to become a big player in the global market. Analyzing the overall performance of Mongolia on a global level, international indexes of different types have shown the following results:

- ▶ According to the 2022 Doing business report by the World Bank, Mongolia ranked 81st out of 190 economies
- ▶ According to "Index of Economic Freedom 2022" by Heritage Foundation, Mongolia has gained an overall score of 66.5 percent out of hundred.

[Seoul convention establishing the Multilateral Investment Guarantee Agency](#)

[Washington Convention on the Settlement of Investment Disputes](#)

[Foreign Investment Protection and Promotion agreements with 43 countries](#)

[Tax treaties with 26 countries](#)

[Mongolia-Japan Economic Partnership Agreement /First FTA/](#)

[Process of accession to APTA](#)

**Source:** Investment guide, 2020  
Ministry of Economy and Development

## LAW ON INVESTMENT /2013/

The Government of Mongolia has been taking an active policy to attract inward FDI since Mongolia adopted a market economic system and has been persistently conducting a policy that stabilizes the legal environment of foreign investment and provides more favorable conditions for investment procedures and regulations. In 2013, the Government of Mongolia passed a new law on investment, which replaced both the old Investment law of 1993 and the Law on Strategic sectors of 2012. The new Investment law enables an open possible investment environment for investors focusing on:

- ▶ No approval to enter the market and buy a local company
- ▶ No discrimination between foreign and local investors
- ▶ Fast registration process
- ▶ Stability guarantees- Provision of Tax stabilization certificate
- ▶ Flexibility and friendly conditions for investors

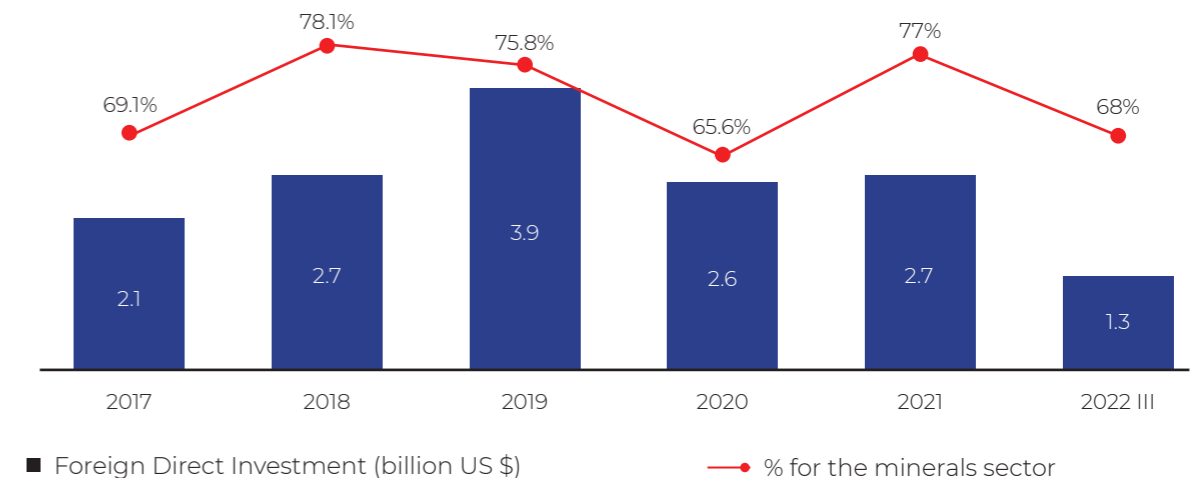
The Law on Investment provides incentives, such as tax exemptions, tax credits, longer terms to possess the land, the increased quota of foreign employees, simplified visa arrangements, and others. Only foreign state-owned entities (those with a minimum of 34% ownership of entities in the mining, media, and communication or financial sectors) must obtain approval from an official government representative. The Investment Law declares that a foreign state's direct or indirect ownership exceeding 50% qualifies it as a foreign state-owned entity.

### INVESTMENT TYPES

- ▶ Joint Ventures, Consortium
- ▶ Mergers and Acquisition
- ▶ Concession, Product sharing, management contract
- ▶ Bond, Securities, and other assets
- ▶ Financial leasing, Franchising
- ▶ Other investment types

## FOREIGN DIRECT INVESTMENT

The 68% of the total Foreign Direct Investment is fueled into the Minerals sector.

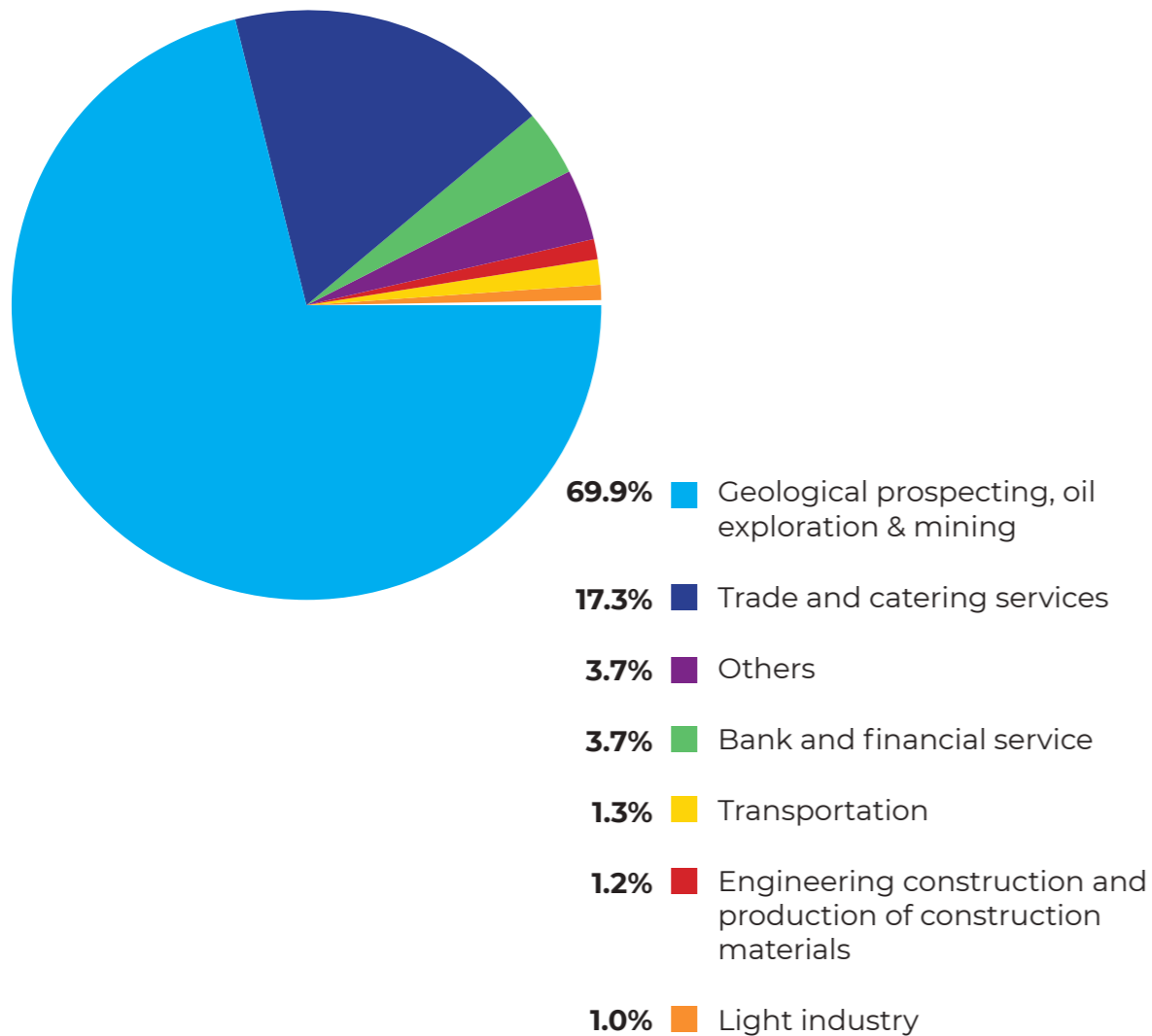


### FOREIGN DIRECT INVESTMENT STATISTICS

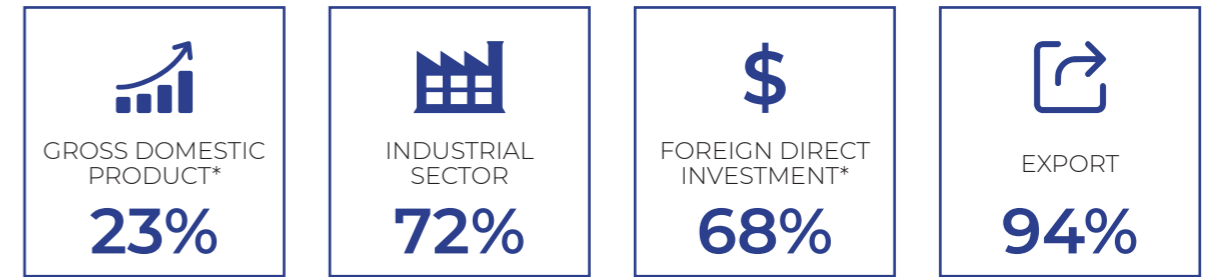
FDI inflow into Mongolia has been significantly increasing for the last few years. Totally 14,932 companies with investments from 120 countries are incorporated and US\$ 26.8 billion has been invested in Mongolia between 1990 and 2019. From 2000-2011, Mongolia registered an intense and sustained increase in FDI inflows, on the back of the dramatic expansion of the mining sector and the development of the Oyu Tolgoi surface mine. Such trends allowed it to reach an all-time peak of US\$ 5 billion in 2011. After 2012, weaker commodity prices added to deteriorating

investor sentiment in Mongolia, ultimately leading to a drastic drop in FDI inflows. However, because the sustainable policy focused on the investors, FDI inflows to Mongolia have been constantly increasing since 2016. Geological prospecting, oil exploration, and mining industries are the main sector destination for FDI coming to Mongolia. Aside from extractives, FDI goes to various service industries, particularly trade and catering services, banking and financial services, and transportation.

### FOREIGN DIRECT INVESTMENT BY SECTORS 2022



## Importance of the Minerals sector



\* Q2 2022, National Statistics Office of Mongolia

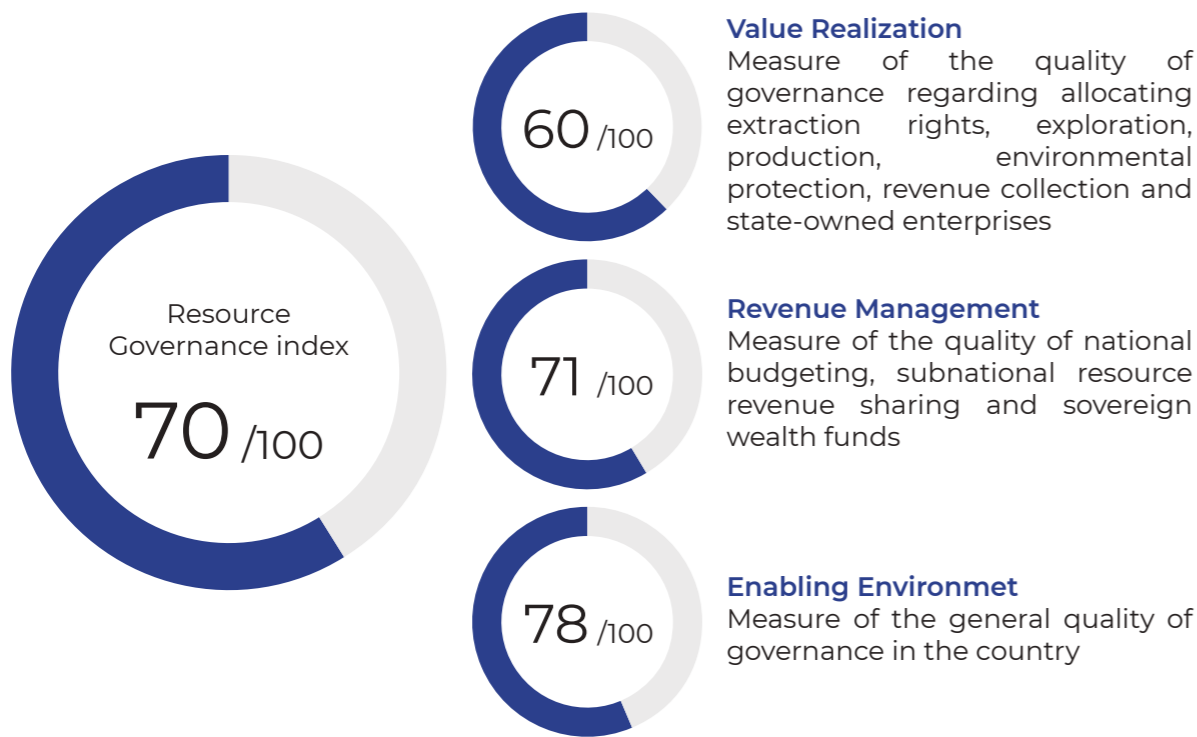
**THE NEW RECOVERY POLICY** aims to encourage Mongolia's post-pandemic recovery by opening up the country to domestic and foreign investment.

GEOLOGICAL RESEARCH, EXPLORATION		2022	
		Paper-based tenement tendering process	~ 2 mil.ha
FOR EXPORT		2022	
COPPER		Copper concentrate	1.5 Mt
		Copper cathode	9.8 Kt
COAL		Metallurgical Coal	31.8 Mt
		Processed coal	6.6%
GOLD	Gold extraction (Mongolian Bank statistics)	Gold	19.7 t
FOR DOMESTIC USE		2021	
PETROLEUM		Petroleum products	1.76 Mt /imported/
STEEL	Steel products	Steel products	572 Kt /imported/

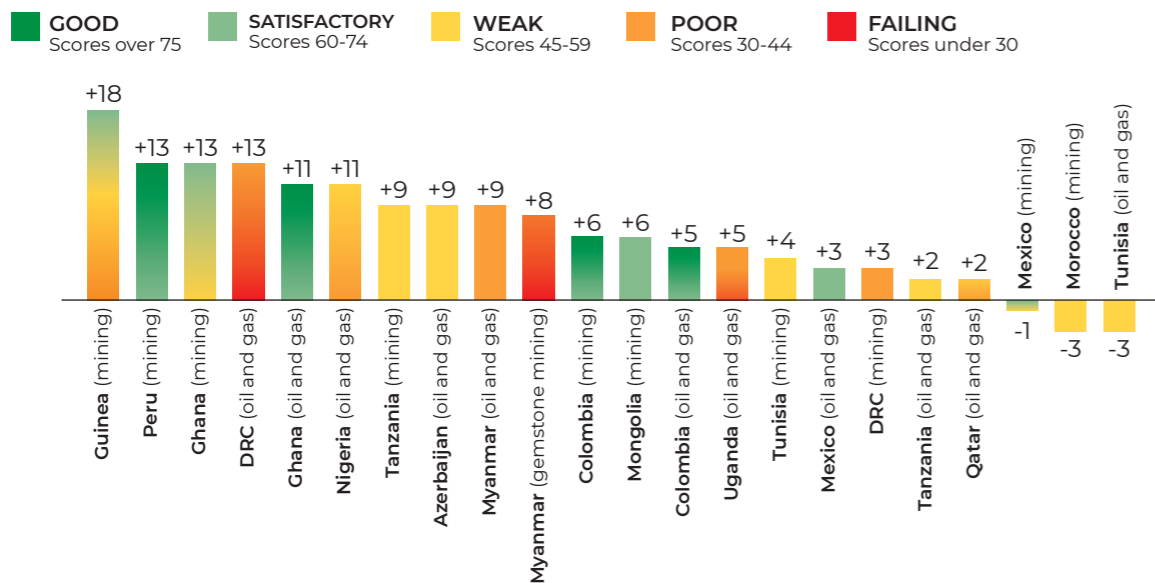
Mongolia's mining sector scored 70 out of 100 points in the 2021 Resource Governance Index (RGI), an increase of 6 points since the 2017 index. Both the value realization and revenue management

components now place firmly within the "satisfactory" performance band, while improvements in the enabling environment push the component into the "good" performance band.

**Mongolia mining: 2021 Resource Governance and component scores**



**Score and performance band shifts between the 2017 and 2021 Resource Governance Indices**



# Policy

## VISION-2050

### Priority economic sectors

- 4.2.1. **Promote strategic mining megaprojects with value-added cost**, processing industry, agriculture, energy, transport, logistics, diversified tourism and accompanying services, small and medium enterprises, and knowledge-based creative production as priority branches of the economy.
- 4.2.13. Develop environment-friendly and **sustainable heavy industry with value-added cost** production on the basis of processing mining raw materials and render support to advanced forms of investment.

## GOVERNMENT ACTION PLAN 2020-2024

### Economic policy:

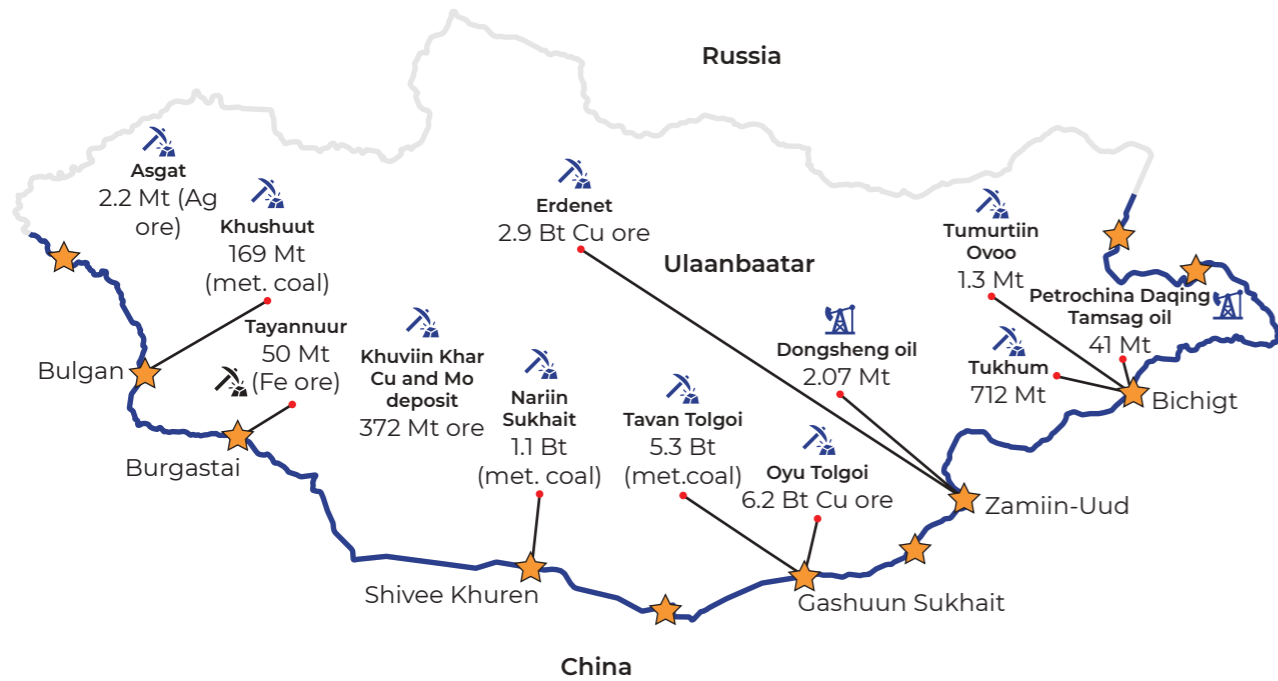
- 3.2.5. Enrich mineral resources and reserves by encouraging foreign investment in high-tech minerals such as rare earth elements, precious, rare, and polymetals, nonmetallic minerals, and petroleum reconnaissance and exploration activities.

## THE MINERALS' SECTOR POLICY

ESG: Environment, Society, Governance				
DRAFTING OF THE SUBSOIL LAW	DRAFTING OF THE MINERAL RESOURCES LAW	DRAFTING OF THE MINERAL RESOURCES LAW	HEAVY INDUSTRY LAW	MINING COMMODITY EXCHANGE LAW
<p><b>SURVEY, RECONNAISSANCE</b></p> <p>Minerals sector potential</p> <ul style="list-style-type: none"> <li>▶ Geological research work</li> <li>▶ Mineral's potential</li> </ul>	<p><b>EXPLORATION</b></p> <p>Mineral resources, reserve</p> <ul style="list-style-type: none"> <li>▶ Detailed exploration work</li> <li>▶ Resource, reserve calculation</li> </ul>	<p><b>EXTRACTION</b></p> <p>Technology update, expenditure decrease</p> <ul style="list-style-type: none"> <li>▶ Extract reserves without sorting</li> <li>▶ Mine expansion</li> <li>▶ Best practice in processing</li> <li>▶ Digital transformation in mining</li> <li>▶ Mine closure – complete management</li> </ul>	<p><b>PROCESSING, REFINING</b></p> <p>Processing plant, Refinery</p> <ul style="list-style-type: none"> <li>▶ Coal processing plant</li> <li>▶ Copper refinery</li> <li>▶ Petroleum/oil refinery</li> <li>▶ Steel factory</li> </ul>	<p><b>COMMODITY SALES/TRADE</b></p> <p>Commodity exchange</p> <ul style="list-style-type: none"> <li>▶ Global market price</li> <li>▶ Fair and competitive</li> <li>▶ Transparent and open</li> </ul>
1990	2020	New recovery policy		

# Infrastructure development

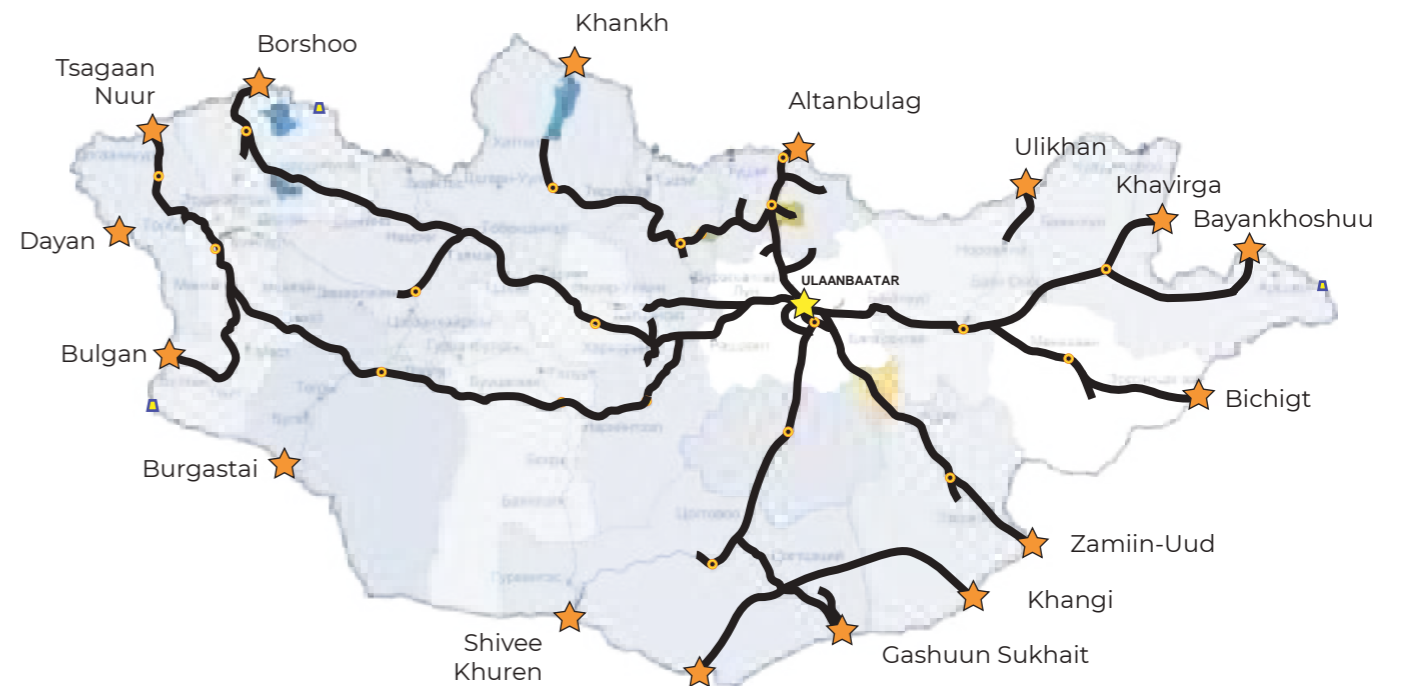
## BORDER CROSSINGS ALONG THE MONGOLIA-CHINA BORDER



## PAVED ROADS 2009



## PAVED ROADS 2023

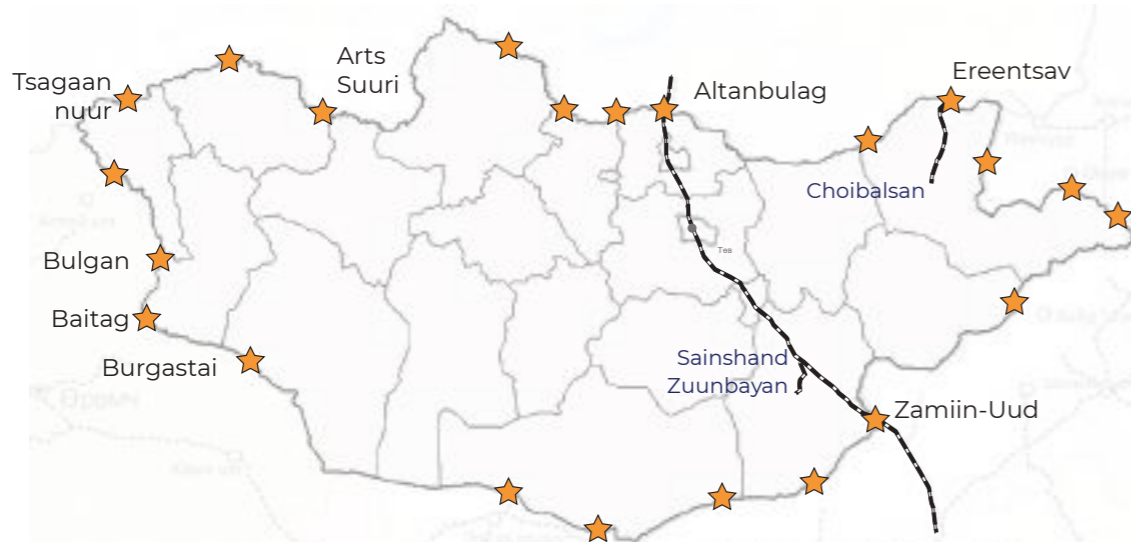


## AIR TRANSPORTATION

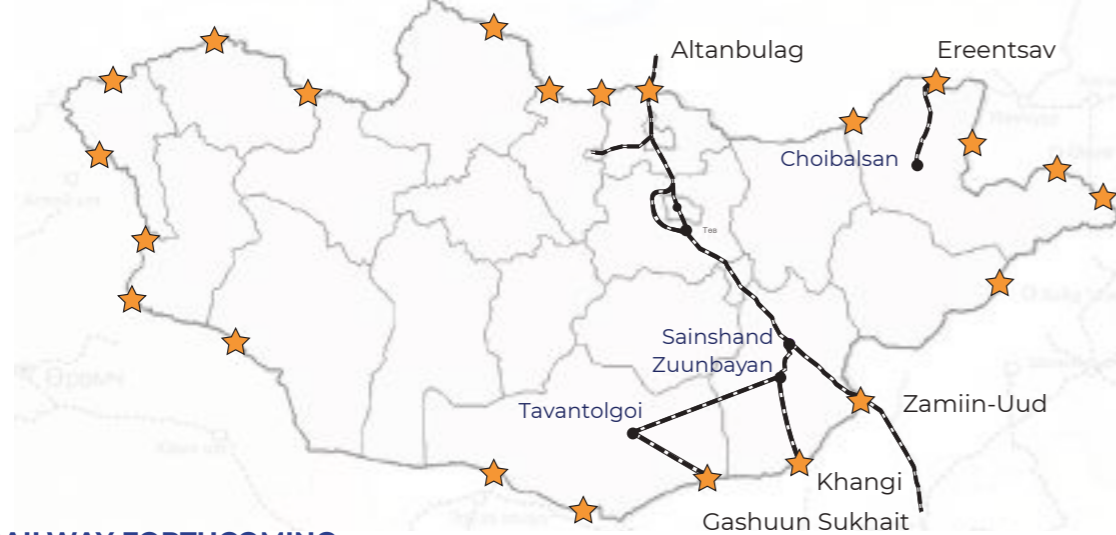
2009	2023
Mongolia → Russia	Mongolia → Russia
Mongolia → German	Mongolia → German
Mongolia → Korea	Mongolia → Korea
Mongolia → China	Mongolia → China
	Mongolia → Turkey
	Mongolia → Vietnam
	Mongolia → Australia
	Mongolia → Japan
	Mongolia → Thailand

Source: Ministry of Economy and Development

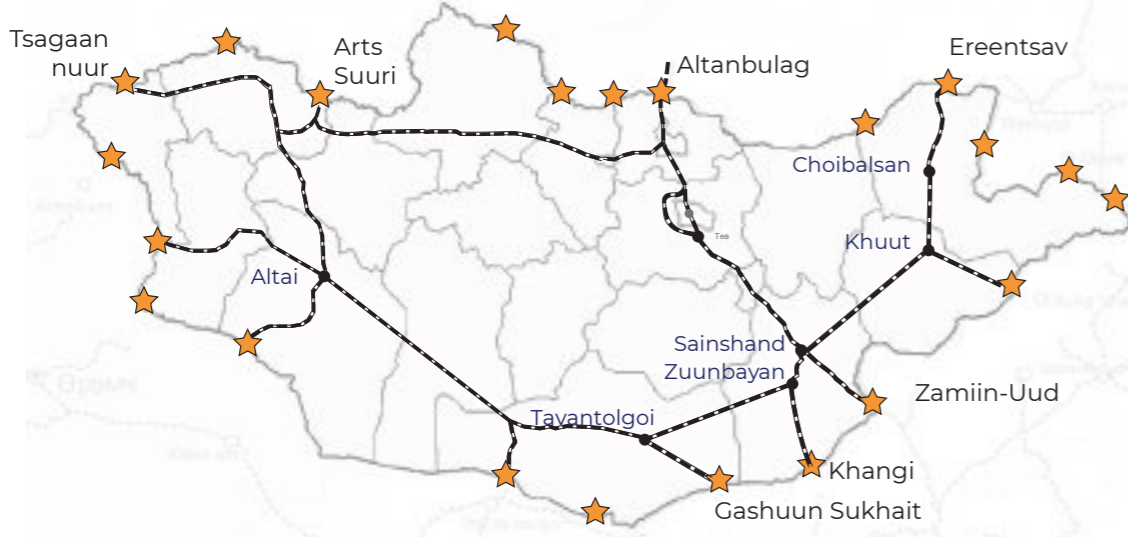
**RAILWAY 2009**



**RAILWAY 2023**



**RAILWAY FORTHCOMING**

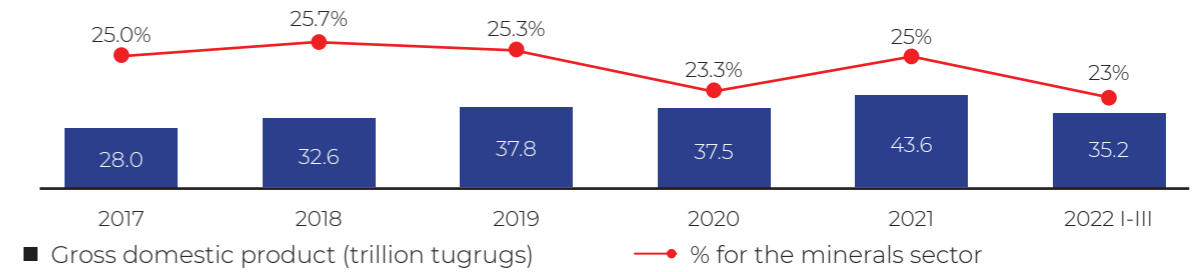


Source: Ministry of Economy and Development

# Importance of the mining sector

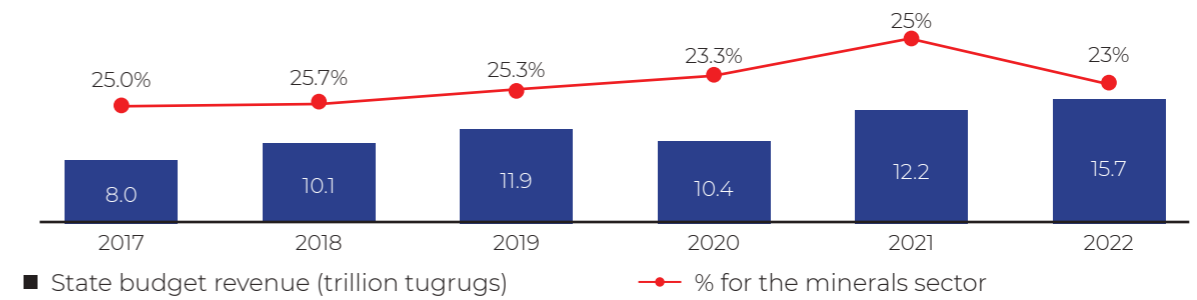
**GROSS DOMESTIC PRODUCT /GDP/**

The 23% of the GDP is gathered from the minerals sector of Mongolia.



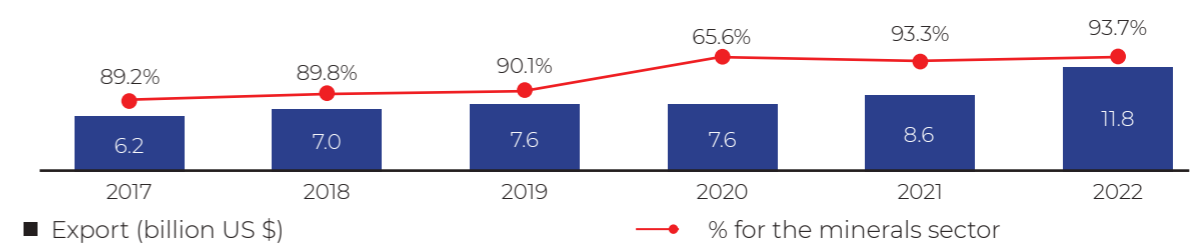
**TOTAL STATE BUDGET REVENUE**

The 25% of the total State Budget revenue of Mongolia is gathered from the minerals sector.



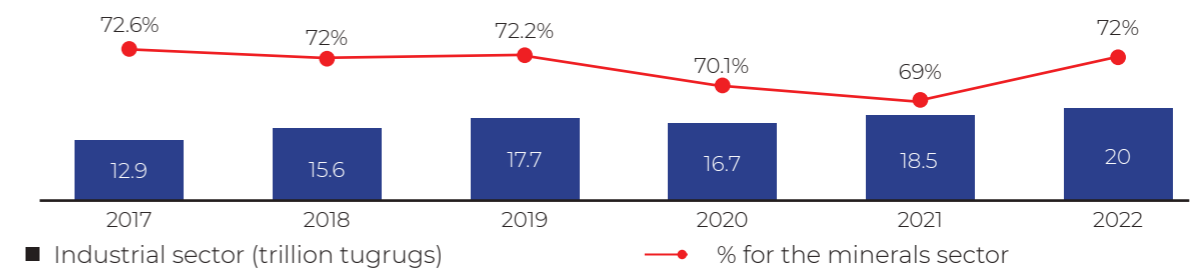
**MINERALS EXPORT**

The 93.7% of the Minerals Export of Mongolia is the minerals sector export.



**INDUSTRIAL SECTOR**

The 72% of the Total product manufacturing is the Minerals sector products.



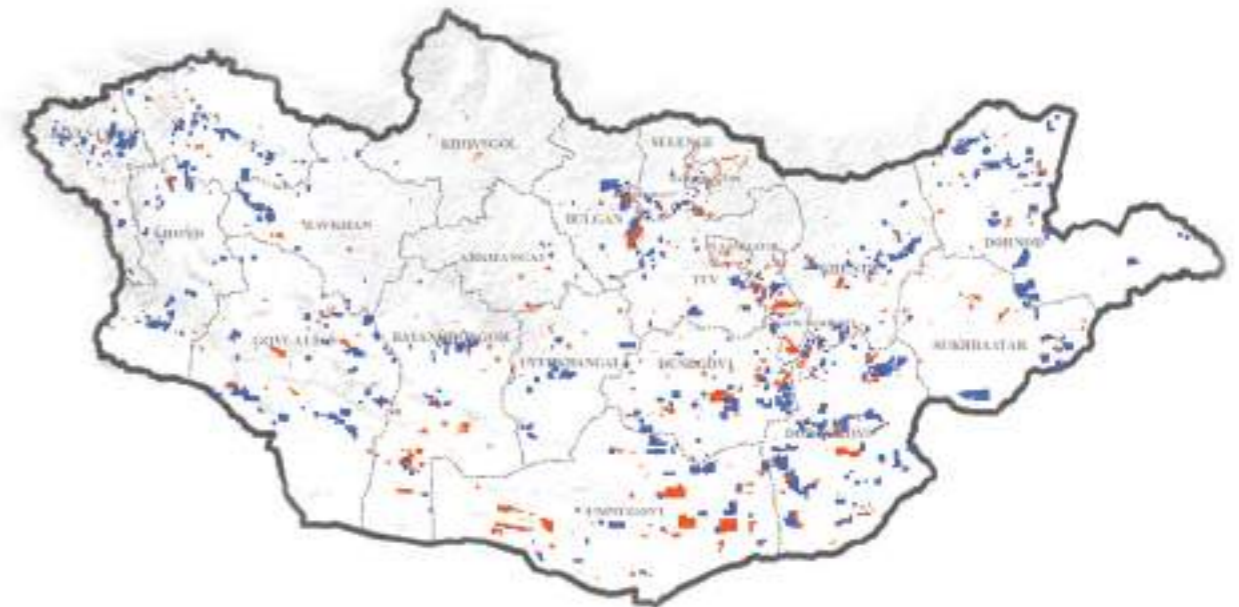
MINERALS POTENTIAL AND  
ACTIVE MINING PROJECTS



# Geological setting



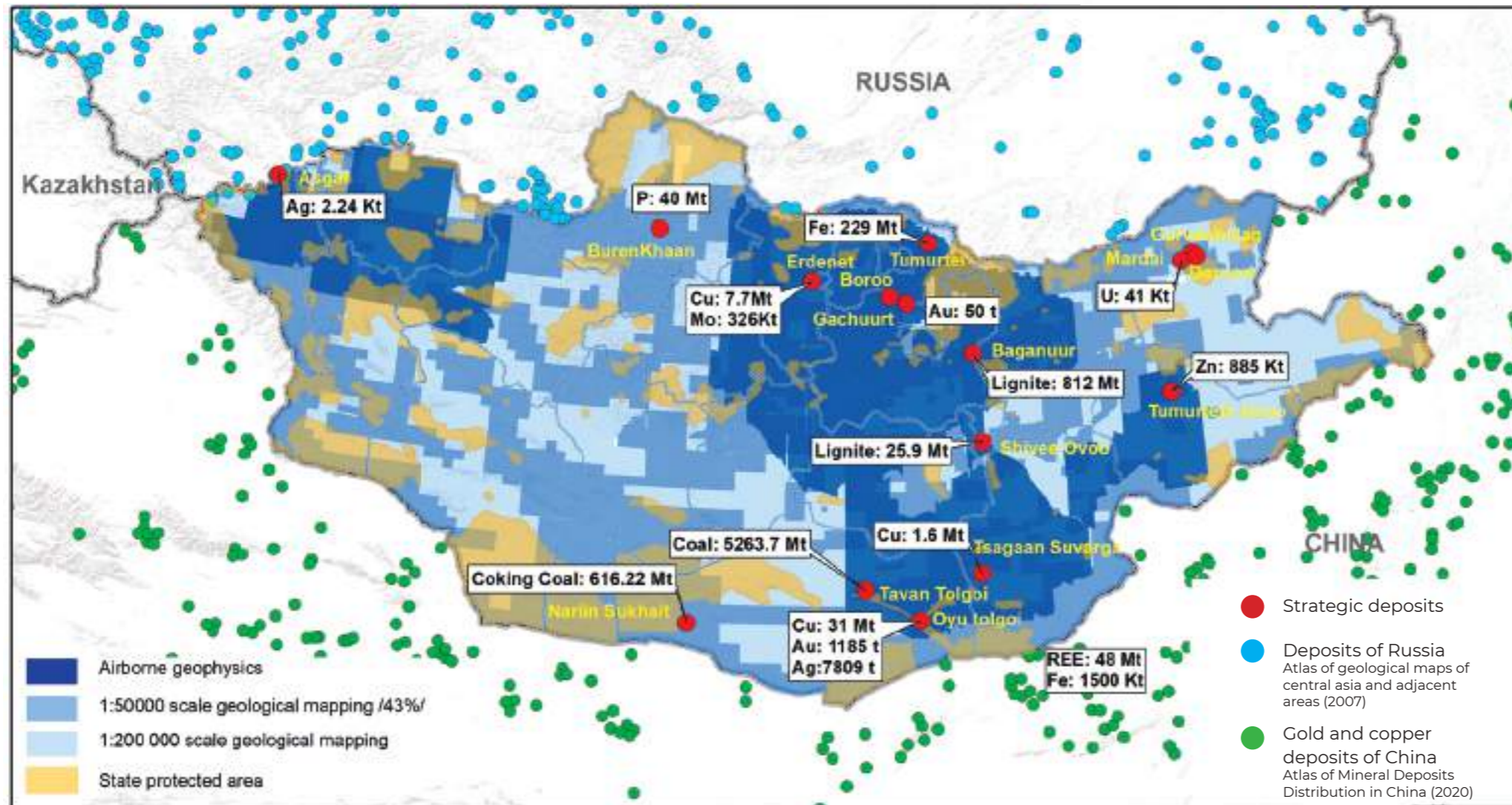
Mongolia is in the heart of the Central Asian Orogenic Belt located between the East European, Siberian, North China, and Tarim cratons, and is considered the largest area of Phanerozoic continental crustal growth (Bold et al., 2016). The evolution of the orogenic belt involved magmatism associated with a variety of geologic settings appropriate for the formation of many types of mineral deposits (Zientek et al., 2015). Mongolia has excellent geologic/natural potential for mineral resource development (Hedenquist & Daneshfar, 2003), which promises an unprecedented growth potential for copper, base metals, gold, and uranium.



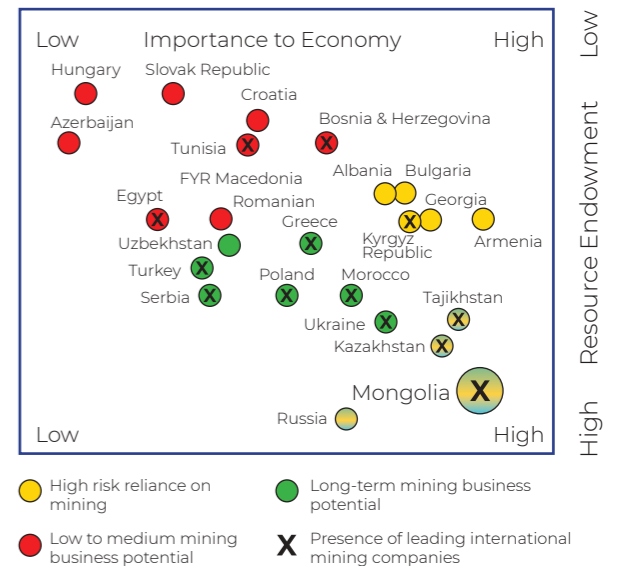
Number of provinces 0-3% Area coverage

0-3%	3-5%	5-10%	10-15%
8	8	3	3

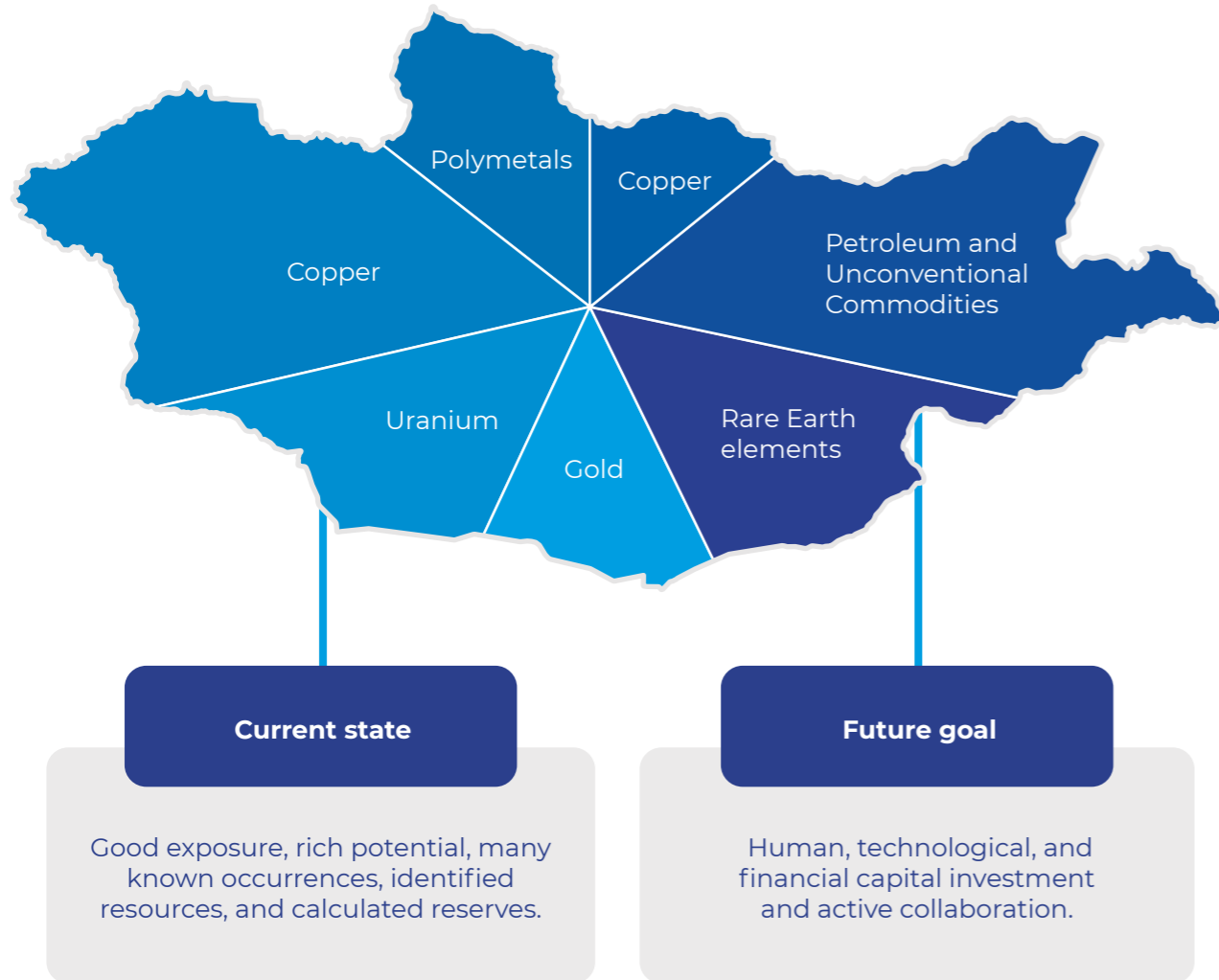
Compared to the mineral resources potential, exploration and mining rights in Mongolian territory are not enough. The Ministry of Mining and Heavy Industry is working towards finding the right balance.



Registered Resources		
Minerals	Unit	Resources
Copper	million.tn	61.4
Coal	billion.tn	33.4
Iron ore	billion.tn	1.84
Gold	tn	448.1
Zinc	million.tn	4.4
Fluorspar	million.tn	34.2
Uranium	thousand.tn	192.2
Crude oil	million.tn	332.6

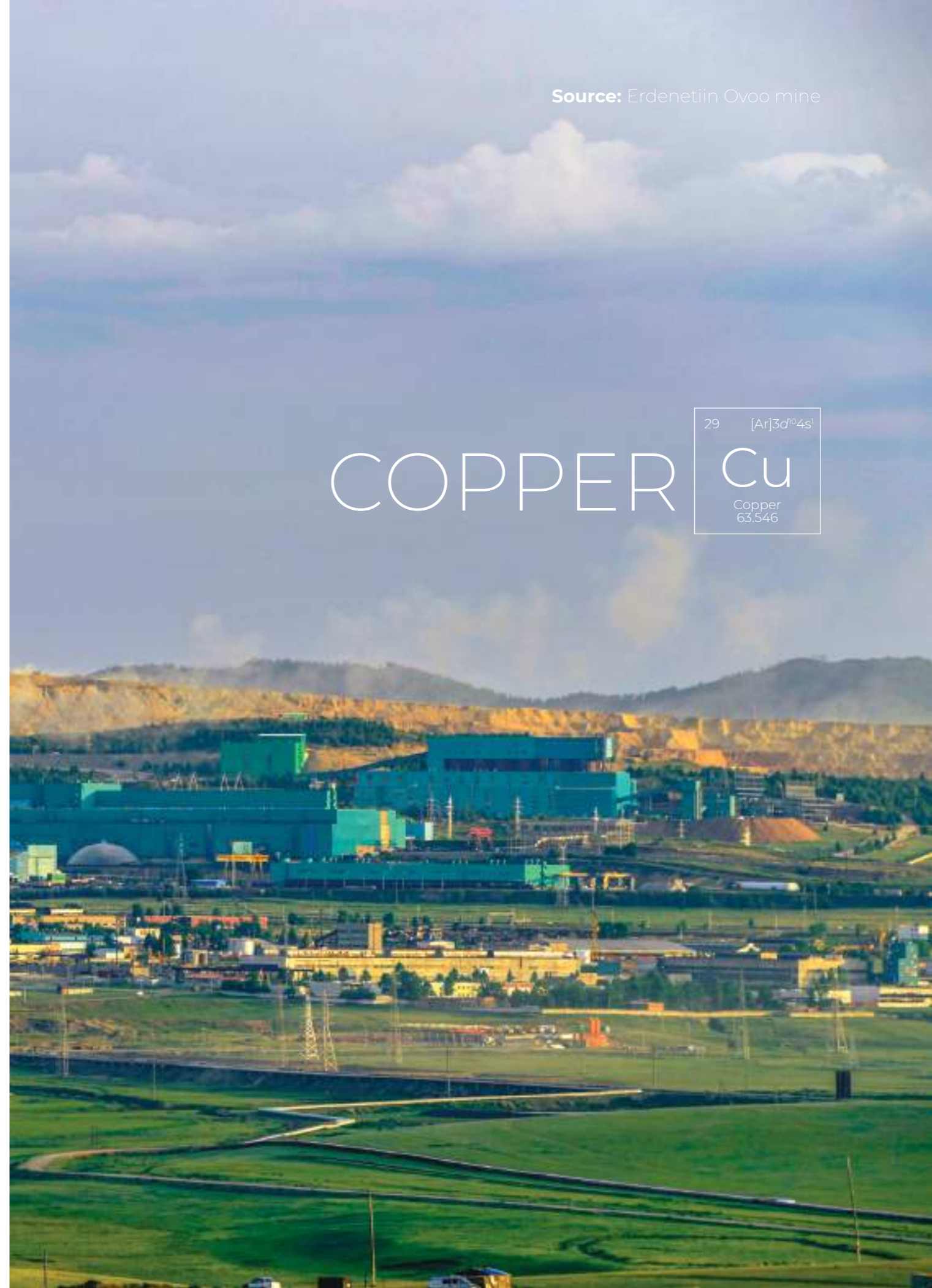
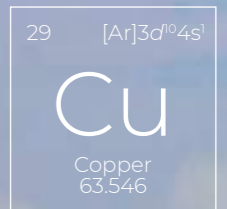


We welcome interested parties and investors to come and work in the Minerals sector of Mongolia.



Source: Erdenetiin Ovoo mine

# COPPER



# Copper potential

## COPPER RESOURCES, 2021



Source: United States Geological Survey (USGS)

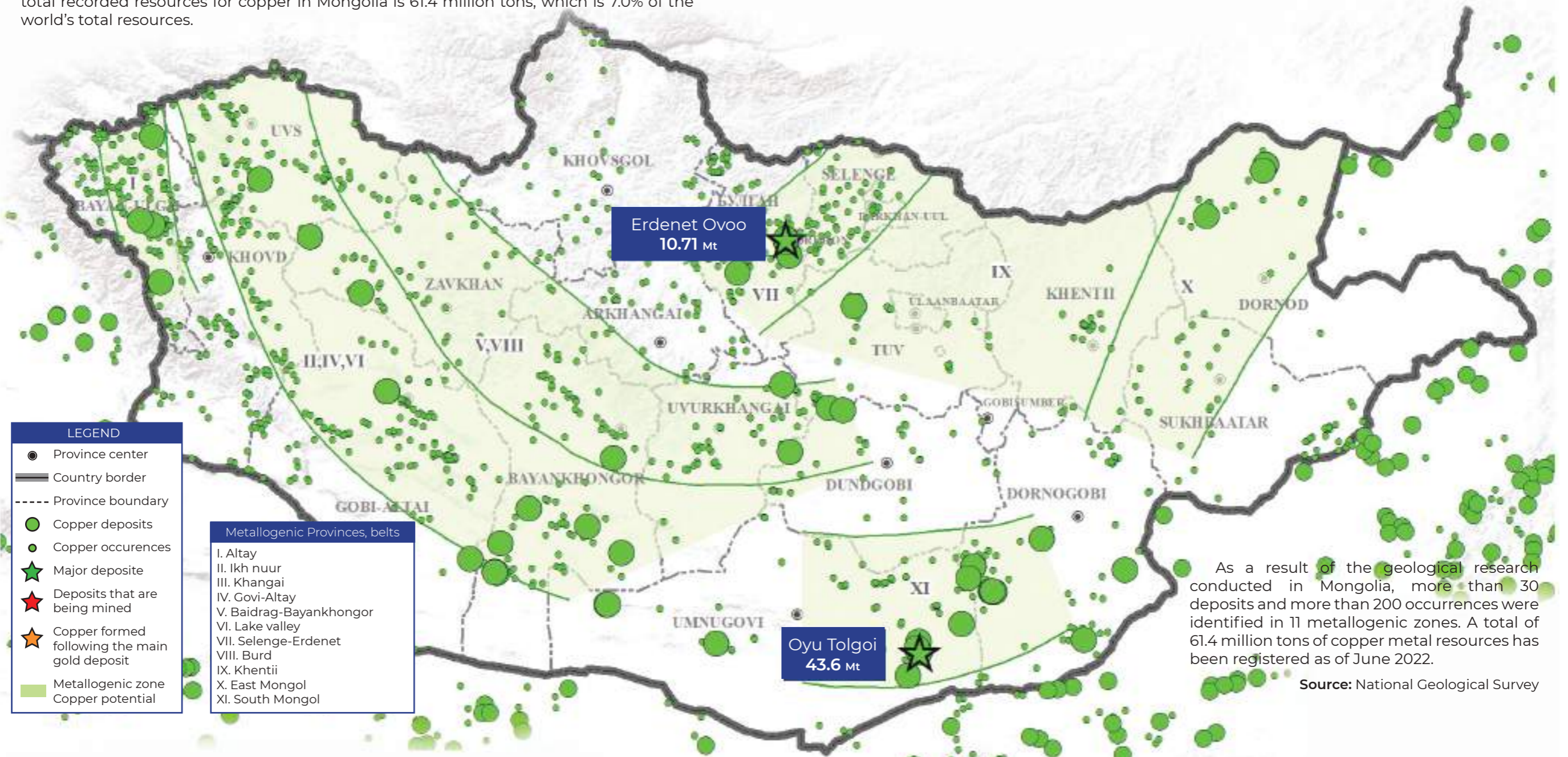
In 2021, copper resources are estimated to be around 880.0 million tons. It is estimated that there are approximately 2,100 million tons of copper ore resources worldwide. The total recorded resources for copper in Mongolia is 61.4 million tons, which is 7.0% of the world's total resources.

## COPPER PRODUCTION, 2021



Source: United States Geological Survey (USGS)

Chile was the world's largest producer in 2021, accounting for 26.7% of the world's total production and 1.3% of the world's total production belongs to Mongolia.



As a result of the geological research conducted in Mongolia, more than 30 deposits and more than 200 occurrences were identified in 11 metallogenic zones. A total of 61.4 million tons of copper metal resources has been registered as of June 2022.

Source: National Geological Survey

# Resources, Reserves, Export

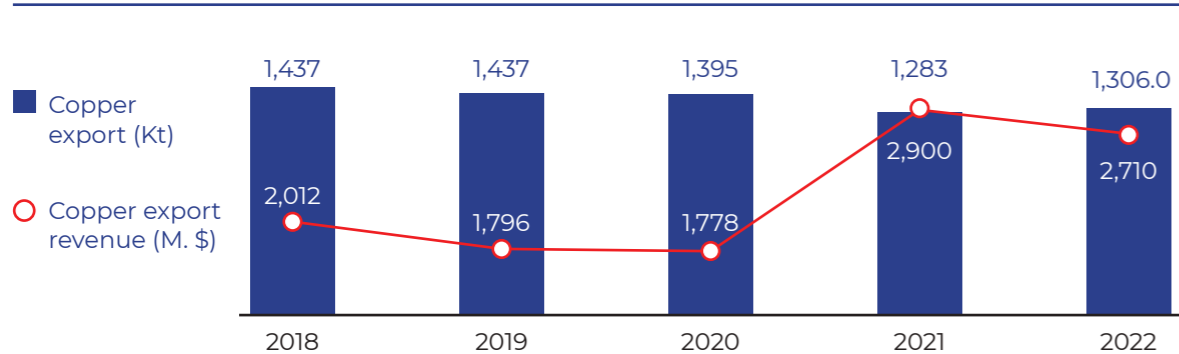
## TOTAL RESOURCES OF COPPER

**10,795.4 Mt** Resources (ore)  
**61.4 Mt** Resources (metal)

## RESOURCES OF MAIN COPPER DEPOSITS

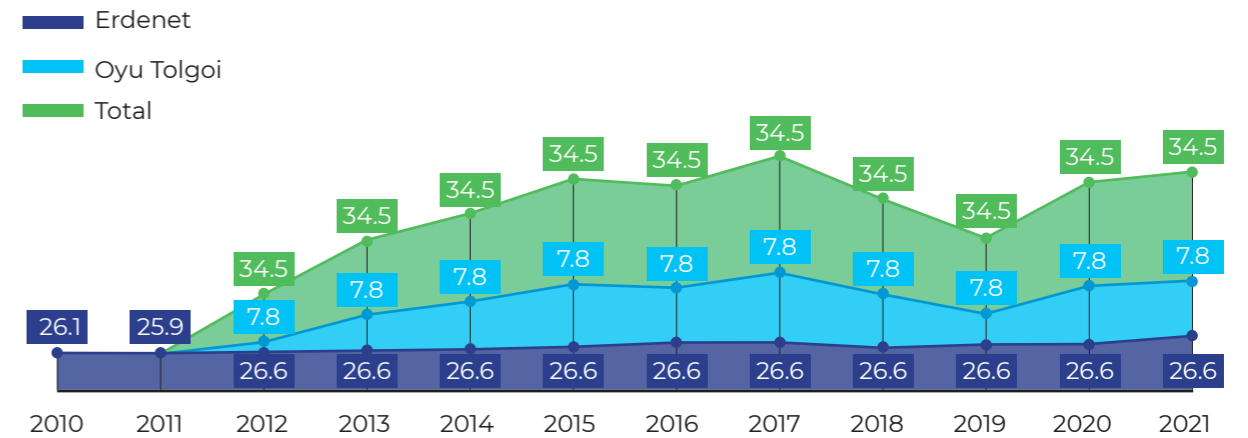
Illustrate	Ore (Mt)	Copper (metal), (Mt)
<b>COPPER RESOURCES IN STRATEGIC DEPOSITS</b> (Oyu tolgoi, Erdenet, Tsgaan suvarga)	<b>9,718.0</b>	<b>56.6</b>
<b>READY FOR MINING DEPOSITS</b>	<b>851.9</b>	<b>2.23</b>
<b>RESOURCE OF TECHNOGENIC DEPOSIT</b>	<b>56.0</b>	<b>0.16</b>
<b>Copper RESOURCES in the form of polymetallic deposits</b>	<b>169.5</b>	<b>2.41</b>
<b>Total resources</b>	<b>10,795.4</b>	<b>61.4</b>

## COPPER EXPORT, REVENUE /income/

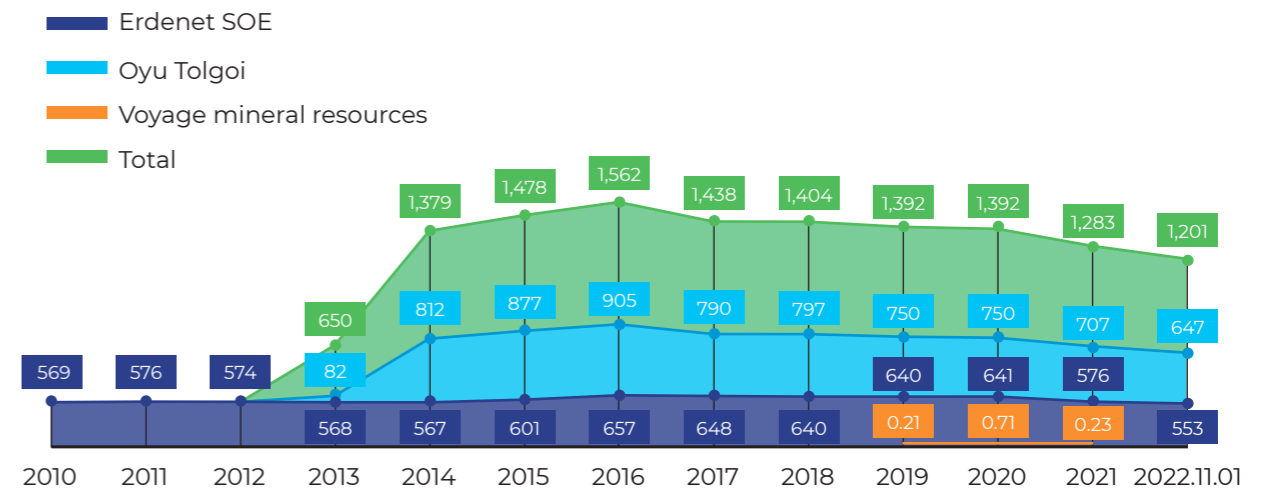


# Exploitation, export

## TOTAL AMOUNT OF ORE MINED (Mt)

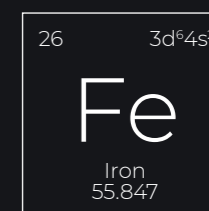


## TOTAL AMOUNT OF COPPER EXPORT COPPER CONCENTRATE (Kt)





IRON



# Iron potential

## IRON ORE RESOURCES / 2021

RESOURCES (by COUNTRY):	1. AUSTRALIA	2. BRAZIL	3. RUSSIA	4. CHINA	MONGOLIA
<b>180.0</b> Bt	<b>51.0</b> Bt	<b>34.0</b> Bt	<b>25.0</b> Bt	<b>20.0</b> Bt	<b>1.8</b> Bt

Source: United States Geological Survey (USGS)

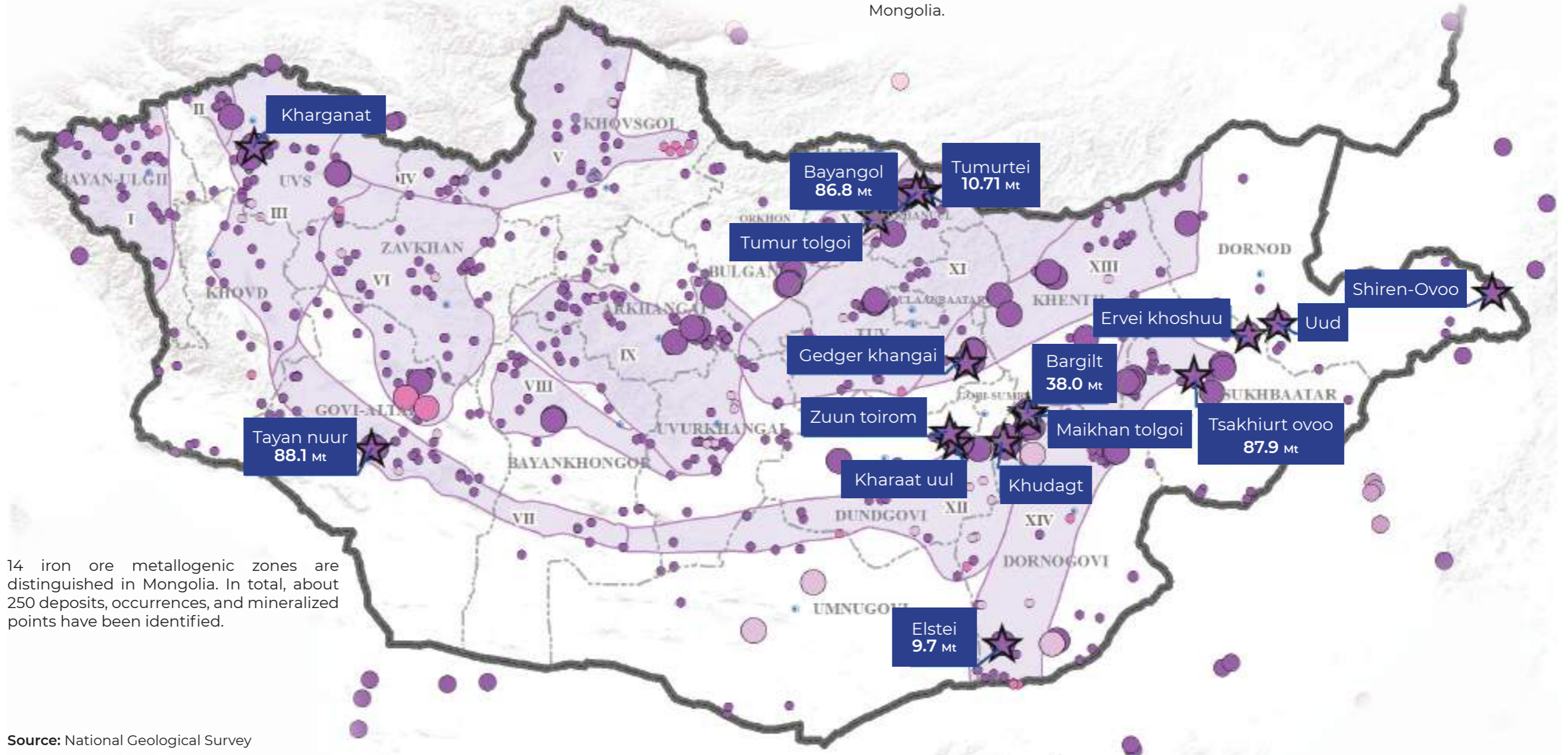
In 2021, iron resources are estimated at 180.0 billion tons worldwide. The total registered iron resources in Mongolia is 1.8 billion tons, which is 1.0% of the world's total resources.

## IRON ORE PRODUCTION IN METALS / 2021

PRODUCTION (Country):	1. AUSTRALIA	2. BRAZIL	3. CHINA	4. INDIA	- MONGOLIA
<b>2.6</b> Bt	<b>900</b> Bt	<b>380</b> Bt	<b>360</b> Bt	<b>240</b> Bt	<b>12.8</b> Mt

Source: United States Geological Survey (USGS)

Australia was the world's largest producer of iron in 2021, accounting for 34.6% of the world's total production and 0.5% of the world's total production of iron belongs to Mongolia.



Source: National Geological Survey

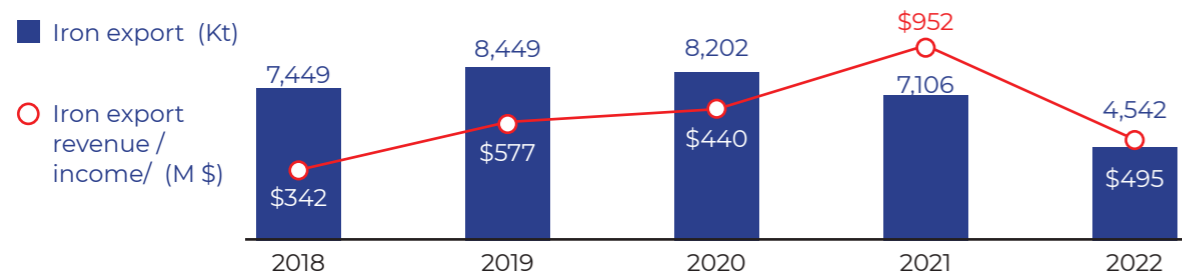
**IRON RESOURCES**

**1,800.0** Mt Iron ore resources      **602.6** Mt Iron resources in metals

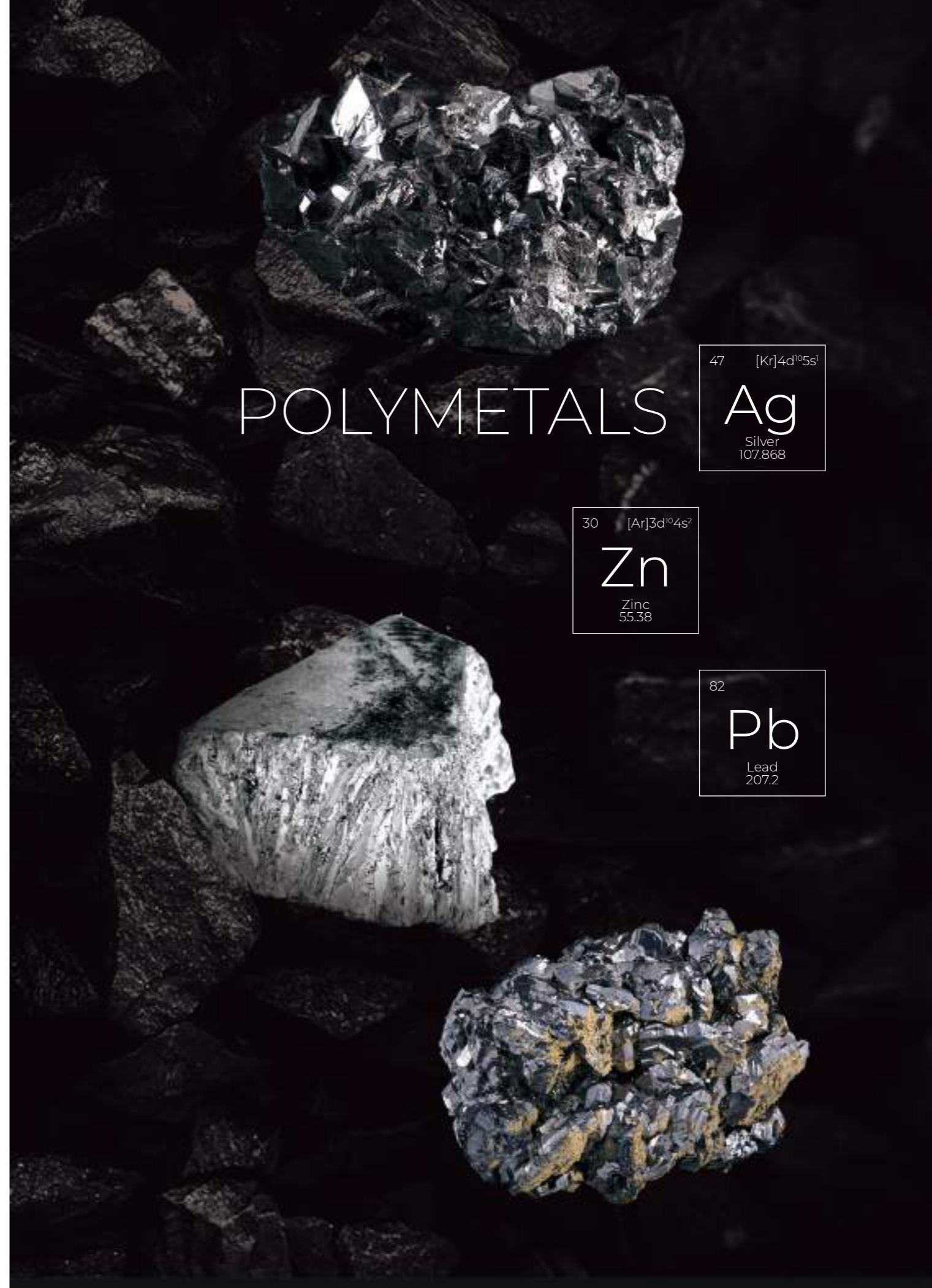
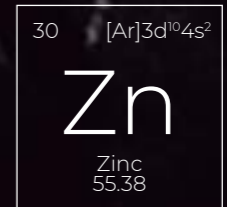
**RESOURCES OF IRON ORE DEPOSITS**

Resources	Ore (Mt)	Iron (in metal), (Mt)
<b>Mining deposits</b>	<b>746.8</b>	<b>312.6</b>
<b>Developed projects</b>	<b>705.7</b>	<b>235.4</b>
<b>Under 3 Mt iron resources</b>	<b>179.7</b>	<b>54.5</b>
<b>Total</b>	<b>1,800.0</b>	<b>602.6</b>

**IRON EXPORT, REVENUE /income/**



POLYMETALS



# Polymetals

## ZINC RESOURCES / 2021

RESOURCES (by COUNTRY):	1. AUSTRALIA	2. CHINA	3. RUSSIA	4. MEXICO	MONGOLIA
<b>250 Mt</b>	<b>69 Mt</b>	<b>44 Mt</b>	<b>22 Mt</b>	<b>19 Mt</b>	<b>4.7 Mt</b>

Zinc resources are estimated to be around 250.0 million tons in 2021. The total recorded zinc resources in Mongolia is 4.7 million tons, which is 1.8% of the world's total resources.

## ZINC PRODUCTION IN METALS / 2021

PRODUCTION (Country):	1. CHINA	2. PERU	3. AUSTRALIA	4. INDIA	MONGOLIA
<b>13.0 Mt</b>	<b>4.2 Mt</b>	<b>1.6 Mt</b>	<b>1.3 Mt</b>	<b>0.8 Mt</b>	<b>53.5 Kt</b>

China was the world's largest producer of zinc in 2021, accounting for 32.3% of the world's total production and 0.4% of the world's total production belongs to Mongolia.

## LEAD RESOURCES / 2021

RESOURCES (by COUNTRY):	1. AUSTRALIA	2. CHINA	3. PERU	4. MEXICO	MONGOLIA
<b>90 Mt</b>	<b>37 Mt</b>	<b>18 Mt</b>	<b>6.4 Mt</b>	<b>5.6 Mt</b>	<b>1.7 Mt</b>

In 2021, lead resources are about 90.0 million tons. The total recorded lead resources in Mongolia is 1.7 million tons, which is 1.8% of the world's total resources.

## LEAD PRODUCTION / 2021

PRODUCTION (Country):	1. CHINA	2. AUSTRALIA	3. USA	4. PERU	MONGOLIA
<b>4.3 Mt</b>	<b>2.0 Mt</b>	<b>0.5 Mt</b>	<b>0.3 Mt</b>	<b>0.3 Mt</b>	<b>11.2 Kt</b>

China was the world's largest producer in 2021, accounting for 46.5% of the world's total production and 0.3% of the world's total production belongs to Mongolia.

## SILVER RESOURCES / 2021

RESOURCES (by COUNTRY):	1. PERU	2. AUSTRALIA	3. POLAND	4. RUSSIA	MONGOLIA
<b>530 Kt</b>	<b>120 Kt</b>	<b>90 Kt</b>	<b>67 Kt</b>	<b>45 Kt</b>	<b>34.5 Kt</b>

In 2021, silver resources are about 530,000 tons. The total registered silver resources in Mongolia is 34.5 thousand tons, which is 6.5% of the world's total resources.

## SILVER PRODUCTION / 2021

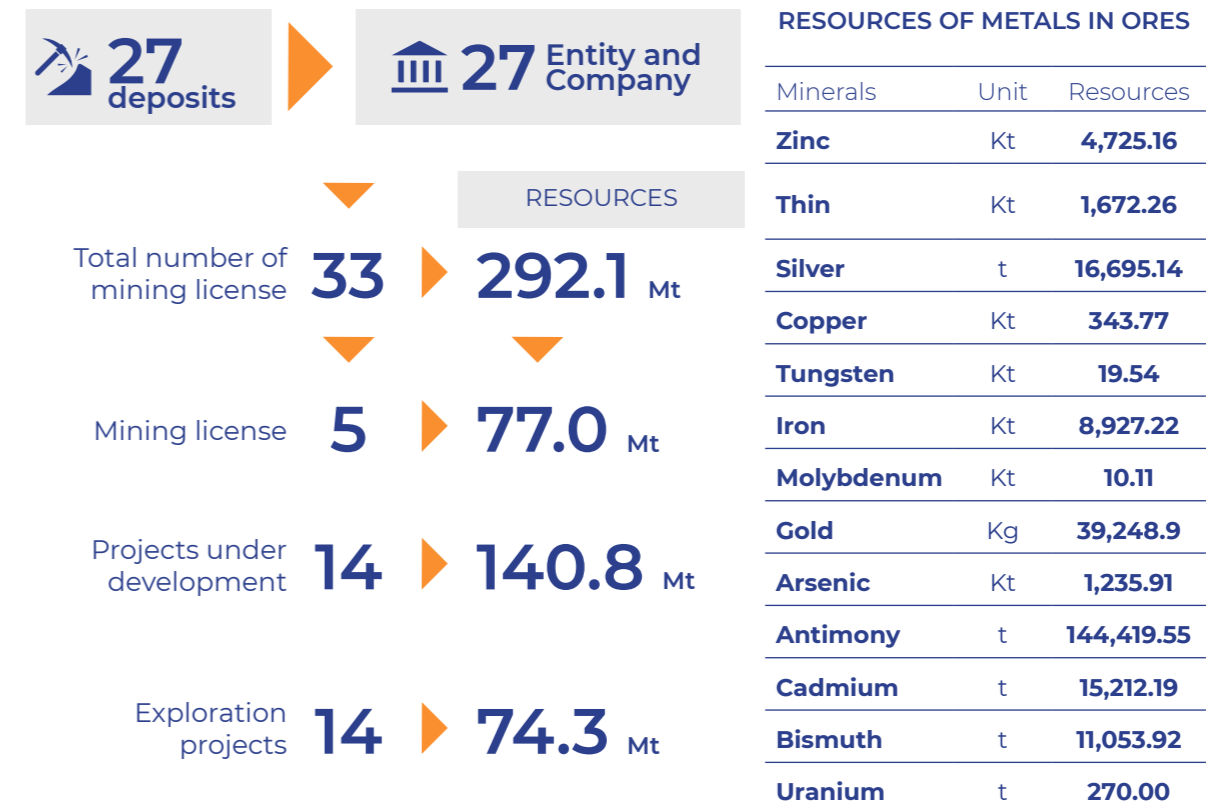
PRODUCTION (Country):	1. MEXICO	2. CHINA	3. PERU	4. CHILE	MONGOLIA
<b>24.0 Kt</b>	<b>5.6 Kt</b>	<b>3.4 Kt</b>	<b>3.0 Kt</b>	<b>1.6 Kt</b>	<b>142 t</b>

Mexico was the world's largest producer in 2021, accounting for 23.3% of global production and 0.6% of the world's total production of silver belongs to Mongolia.

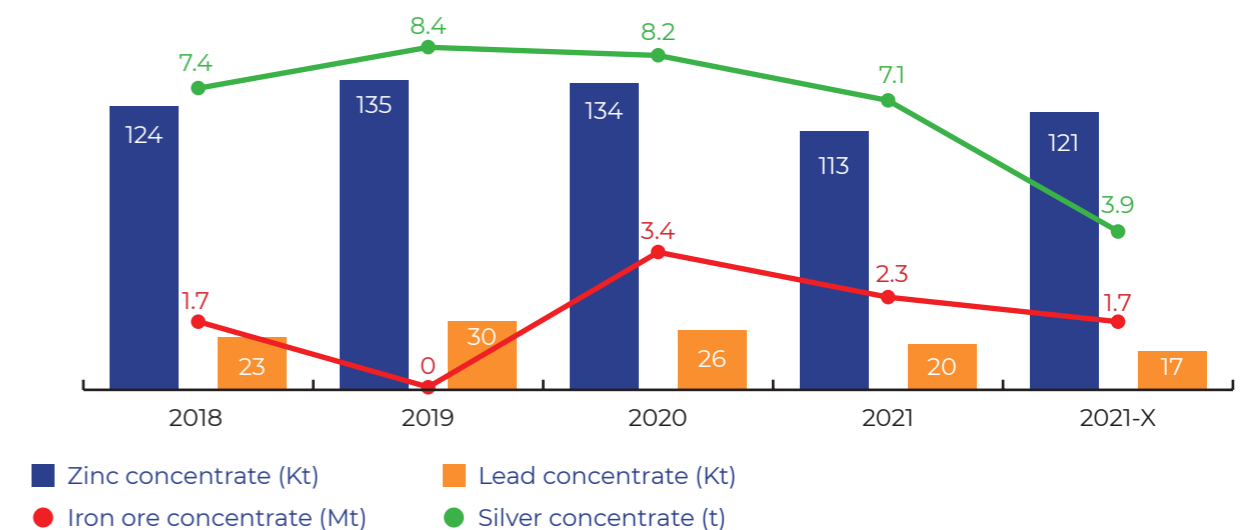
Source: United States Geological Survey (USGS)

# General information on polymetallic deposits of mongolia

## RESOURCES OF POLYMETALS



## ZINC, LEAD, SILVER, AND IRON EXPORT (Amount)



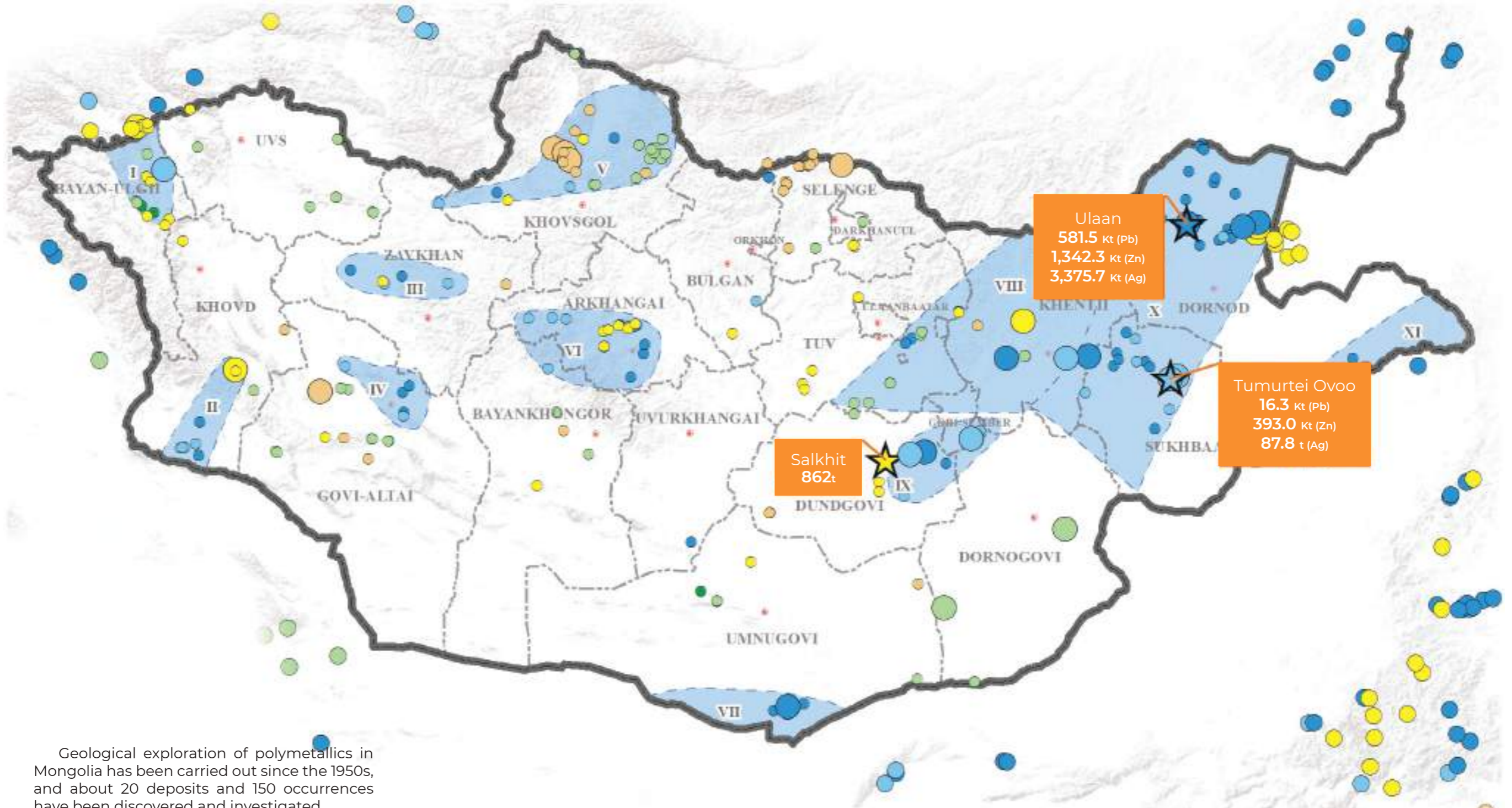
Source: Mongolian Customs General Administration

## Regions of polymetallic ore deposits in Mongolia

Geological exploration of polymetals in Mongolia has been carried out since the 1950s, and about 20 deposits and 150 occurrences have been discovered and investigated.

### LEGEND

- Pb
- Co
- Perspective polymetallic regions
- Zn
- Al
- ★ Active projects
- Ni



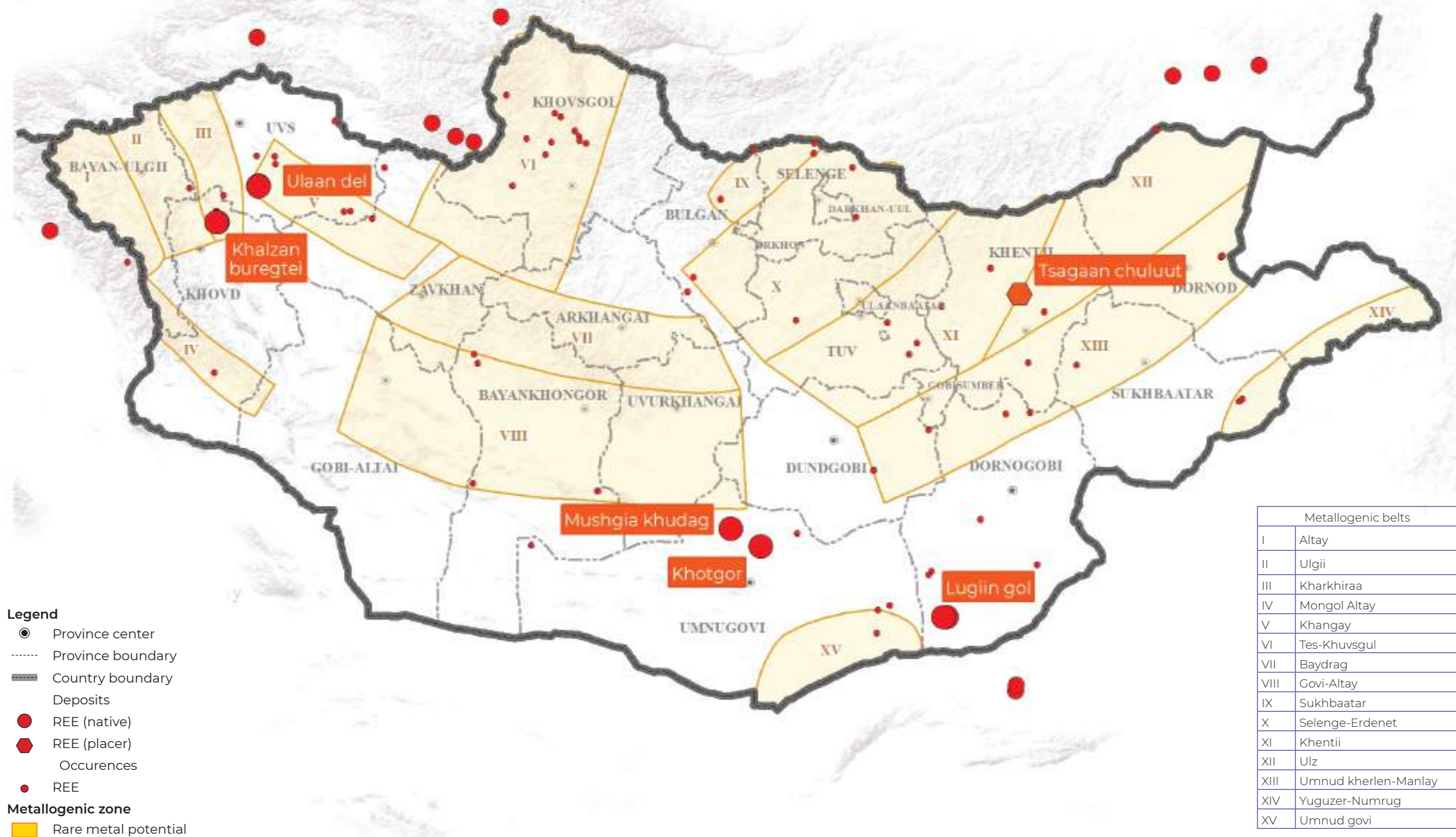
Geological exploration of polymetallics in Mongolia has been carried out since the 1950s, and about 20 deposits and 150 occurrences have been discovered and investigated.



# RARE EARTH ELEMENTS

60 [Xe]3f <sup>6</sup> 6s <sup>2</sup> <b>Nd</b> Neodymium 144.242	21 [Ar]3d <sup>1</sup> 4s <sup>2</sup> <b>Sc</b> Scandium 44.955908	57 [Xe]5d <sup>1</sup> 6s <sup>2</sup> <b>Sc</b> Lanthanum 138.90547	63 [Xe]4f <sup>7</sup> 6s <sup>2</sup> <b>Eu</b> Europium 151.964	70 [Xe]4f <sup>14</sup> 6s <sup>2</sup> <b>Yb</b> Ytterbium 173.045
71 [Xe]4f <sup>14</sup> 5d <sup>1</sup> 6s <sup>2</sup> <b>Lu</b> Lutetium 174.9668	58 [Xe]4f <sup>2</sup> 6s <sup>2</sup> <b>Ce</b> Cerium 140.116	66 [Xe]4f <sup>10</sup> 6s <sup>2</sup> <b>Dy</b> Dysprosium 162.50	65 [Xe]4f <sup>9</sup> 6s <sup>2</sup> <b>Tb</b> Terbium 158.925354	64 [Xe]4f <sup>7</sup> 5d <sup>1</sup> 6s <sup>2</sup> <b>Gd</b> Gadolinium 157.25
68 [Xe]4f <sup>2</sup> 6s <sup>2</sup> <b>Er</b> Erbium 167.259	61 [Xe]4f <sup>6</sup> 6s <sup>2</sup> <b>Lu</b> Promethium 145	39 [Kr]4d <sup>1</sup> 5s <sup>2</sup> <b>Y</b> Yttrium 88.90584	59 [Xe]4f <sup>3</sup> 6s <sup>2</sup> <b>Pr</b> Praseodymium 140.90766	62 [Xe]4f <sup>6</sup> 6s <sup>2</sup> <b>Sm</b> Samarium 150.36
69 [Xe]4f <sup>3</sup> 6s <sup>2</sup> <b>Tm</b> Thulium 168.934218	67 [Xe]4f <sup>11</sup> 6s <sup>2</sup> <b>Ho</b> Holmium 164.930328			

# Rare Earth elements potential



## RARE EARTH ELEMENT DEPOSITS OF MONGOLIA

Project owner	Deposit name	Province, Subprovince	Valuable component average content,% g/m <sup>3</sup> / RE <sub>2</sub> O <sub>3</sub> or oxidized/	Resources, t	Reserves, t /RE <sub>2</sub> O <sub>3</sub> /	Dominant element
REO LLC	Lugiin gol /1982, 1990, 2009, 2013/	Dornogovi, Khatanbulag	2.67 -2.71	541,316,630	14,519.34	Light /lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium/
ECTU LLC						
Khotgor Minerals LLC	Khotgor /1983, 2002/	Umnugovi, Tsogt ovoo	1.26	135,357,200	1,213,700	Light /lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium/
Remet LLC	Mushgia khudag /1989, 2010/	Umnugovi Mandal ovoo	1.37-3.37	25,235,505	365,102.25	Light /lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium/
JSB Mining LLC						
Mongolian National Riir Yirt Corp	Khalzan Buregtei /1984, 2015/	Khovd, Myangad	TREO-0.46, Dy-0.01, Ta-0.01, Nb-0.1, Zr-0.30, CREO-0.18	268,175,530.43	1,203,142.64	Light, heavy /lanthanum, cerium, praseodymium, neodymium, samarium, gadolinium, dysprosium, erbium/
Mongolian National Riir Yirt Corp						
Mongolian Lanthanoid Corporation LLC	Khalzan Buregtei /1984, 2014/	Khovd, Myangad	(Tr+Y) <sub>2</sub> O <sub>3</sub> -0.28 Zr <sub>2</sub> O-0.51, (HTR+Y) <sub>2</sub> O <sub>3</sub> -0.08 Nb <sub>2</sub> O <sub>5</sub> -0.07, TREO-0.44	245,526,900	811,791.58	
NABD LLCO	Tsagaan Chuluut /1953, 2018/	Binder, Umnudelger	Monazite – 460 g/ m <sup>3</sup>	596,701	Monazite – 274.55	Light /ceri/, uranium, thorium
Geo-Info LLC	Ulaan del /2015, 2017/	Uvs, Zavkhan	0.164	82,130.4	C-124.78	Light, heavy /lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, erbium, holmium, ytterbium/
<b>Total</b>				<b>1,215,611,765</b>	<b>3,608,255.37</b>	<b>Monazite – 274.55</b>

URANIUM

92 [Rn]5f<sup>3</sup>6d<sup>1</sup>7s<sup>2</sup>

U

Uranium  
238.02891

# Uranium potential

## URANIUM RESOURCES, 2022



Source: World nuclear association, National geological survey of Mongolia

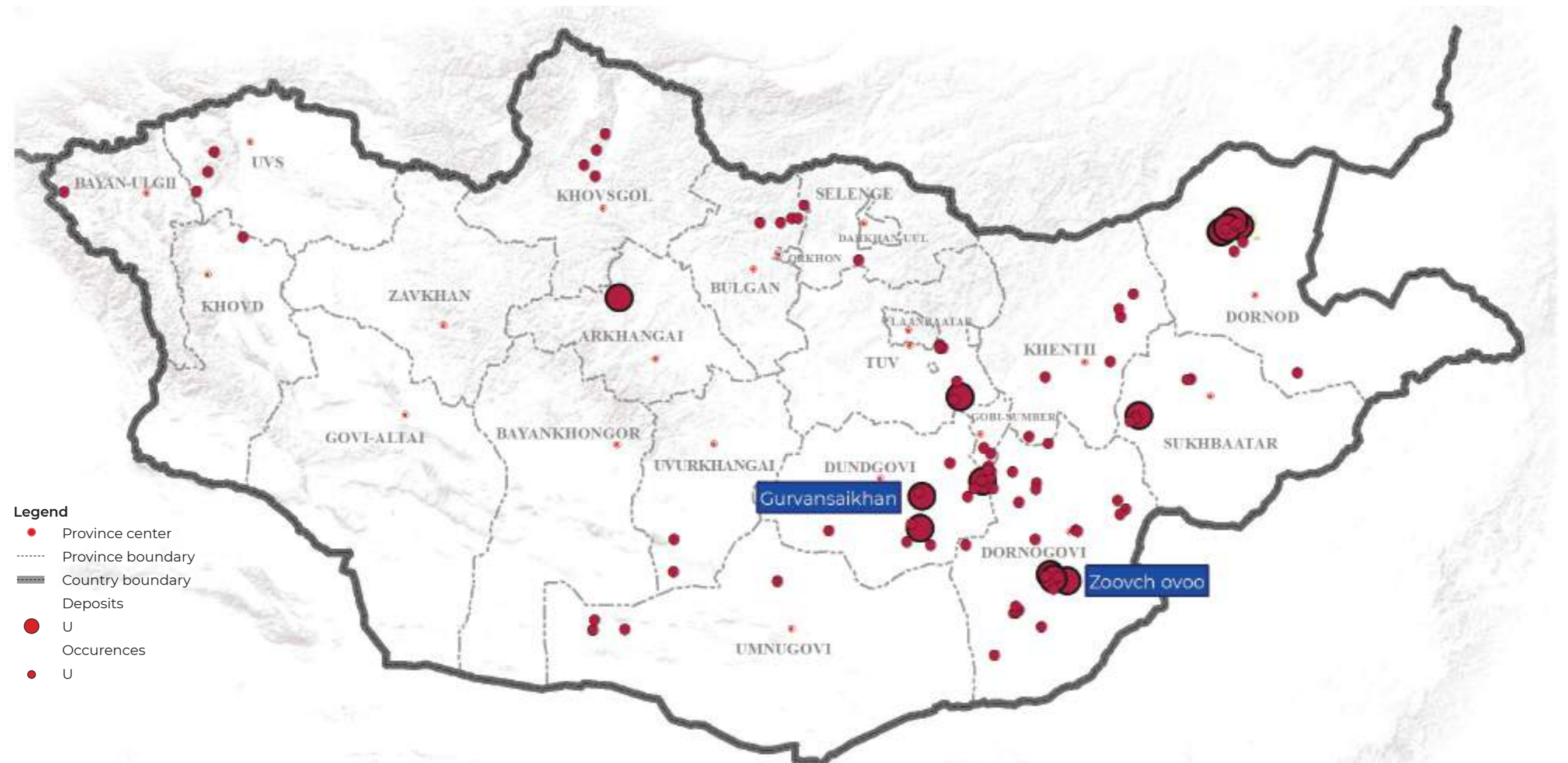
In 2022, uranium resources are about 6.1 million tons. The total registered uranium resources in Mongolia is 192.2 thousand tons, which is 3.1% of the world's total resources.

## URANIUM PRODUCTION / 2020



Source: World nuclear association, Badrakh Energy LLC

Kazakhstan has become the world's largest producer in 2020 and accounts for 40.8% of the total production, while Mongolia is conducting a pilot production at the Zuuvch-Ovoo deposit located in the Ulaanbadrakh subprovince (soum) of Dornogovi Province (aimag).



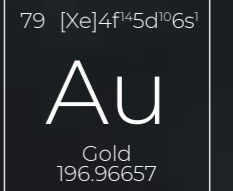
# Uranium of Mongolia

## URANIUM DEPOSIT RESOURCES

Nº	Deposit name	Resources (metal/tons)
1	Mardain gol	<b>1,948.0</b>
2	Nemer	<b>5,937.62</b>
3	Dornot	<b>27,221.0</b>
4	Ulaan	<b>270</b>
5	Gurvanbulag	<b>13,058.3</b>
6	Dulaan Uul	<b>11,896.44</b>
7	Zuuvch Ovoo	<b>93,290.63</b>
8	Ulziit	<b>3,075.7</b>
9	Kharaat	<b>7,288.0</b>
10	Khairkhan	<b>8,406.5</b>
11	Gurvansaikhan	<b>4,250.1</b>
12	Enger ar	<b>80.52</b>
13	Dalt	<b>15,518.11</b>



GOLD



# Gold potential

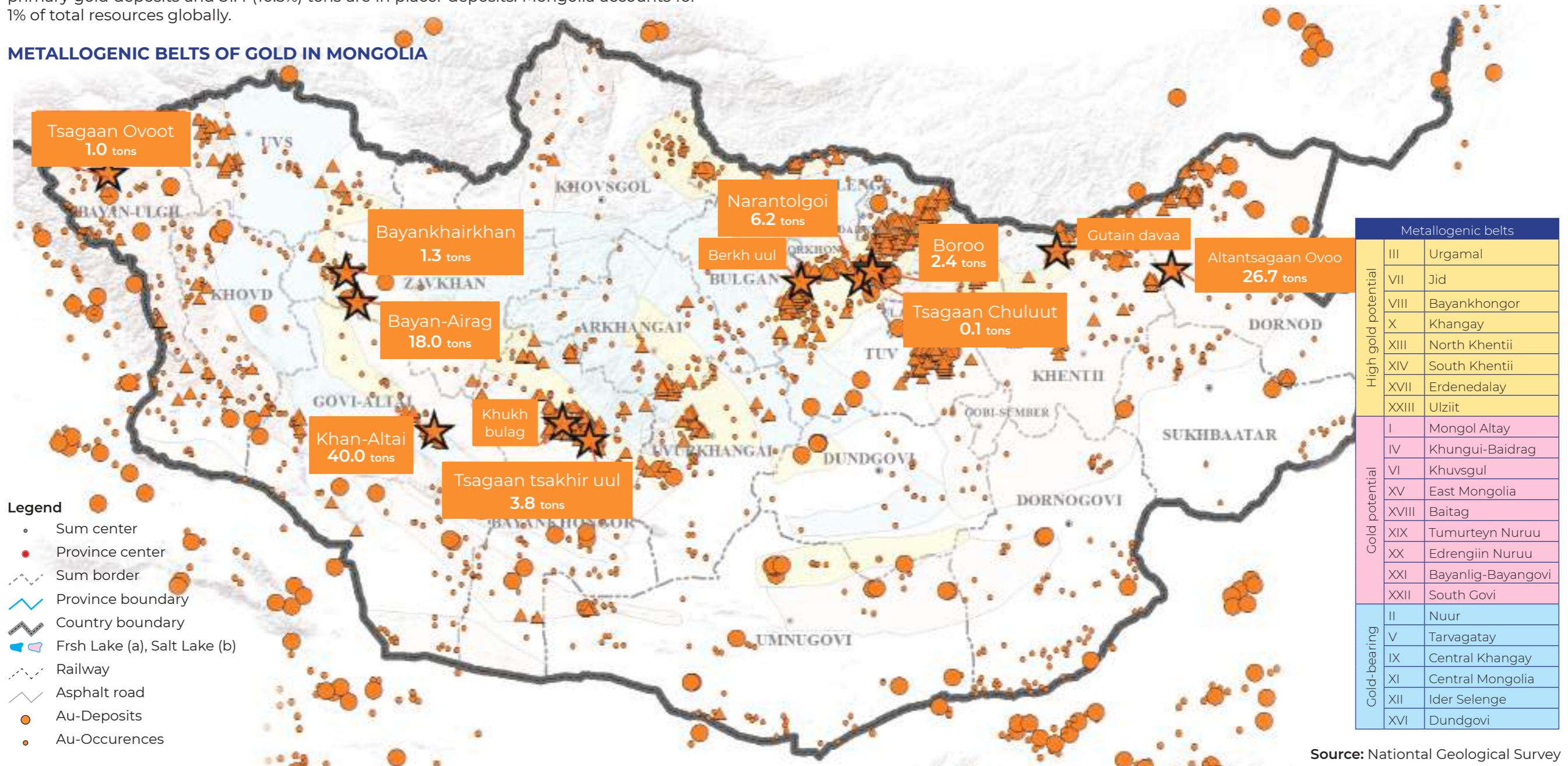
## GOLD RESOURCES, 2021



Source: United States Geological Survey (USGS)

The total registered gold resources in Mongolia is 490.07 tons (excluding the gold resources of the Oyu Tolgoi copper-gold deposit) of which 438.67 (89.5%) tons are in primary gold deposits and 51.4 (10.5%) tons are in placer deposits. Mongolia accounts for 1% of total resources globally.

## METALLOGENIC BELTS OF GOLD IN MONGOLIA



Source: National Geological Survey

## GOLD PRODUCTION, 2021



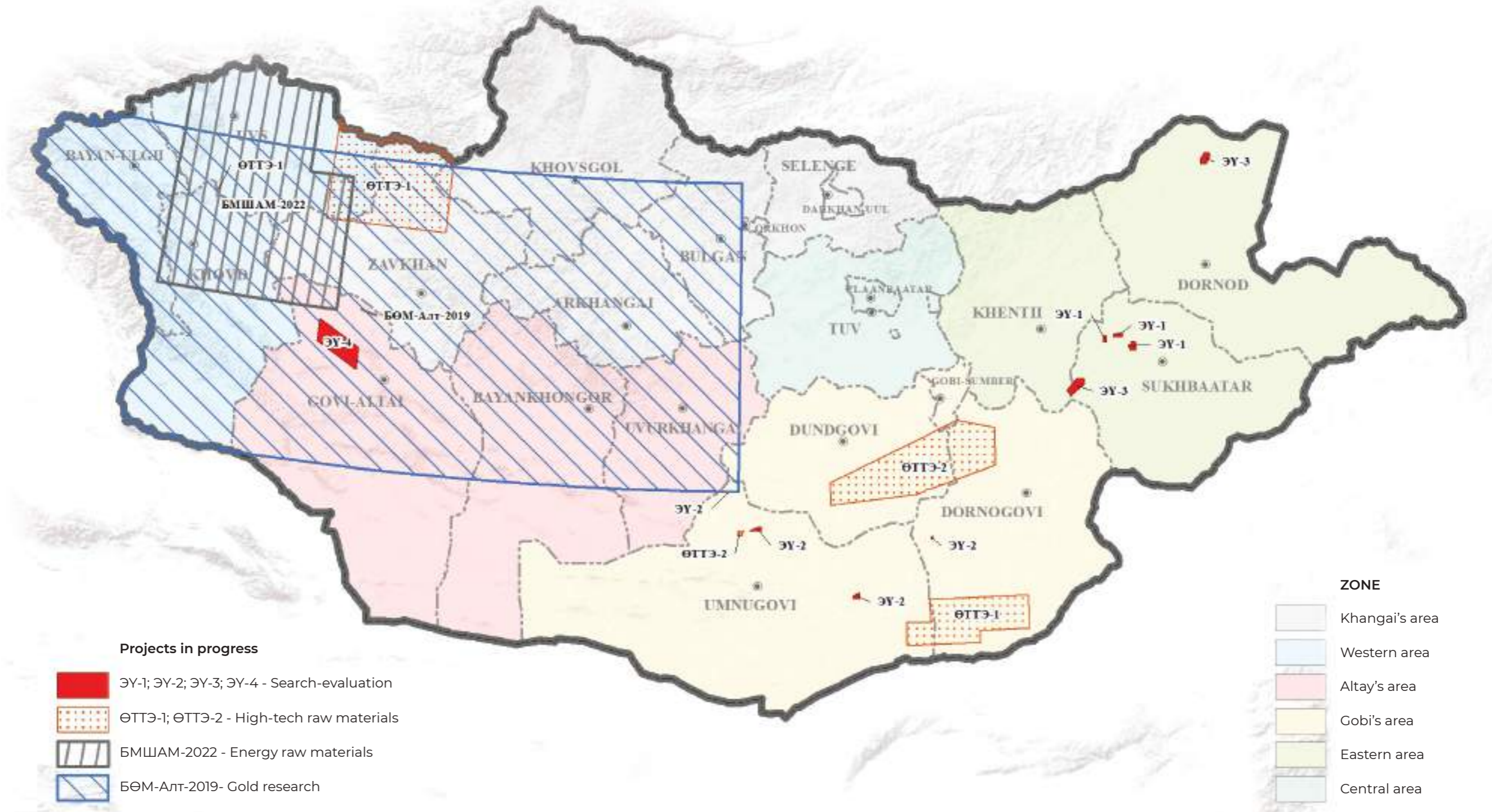
Source: United States Geological Survey (USGS)

China was the world's largest producer in 2021, accounting for 9.3% of the world's total production.

# State-funded geological survey

According to the basic geological surveys conducted in the eastern part of the country only, about 30 thousand tons of probable Au resources are estimated.

Hence, human and financial capital investments are needed for further studies on the ground.



# PETROLEUM AND UNCONVENTIONAL COMMODITIES

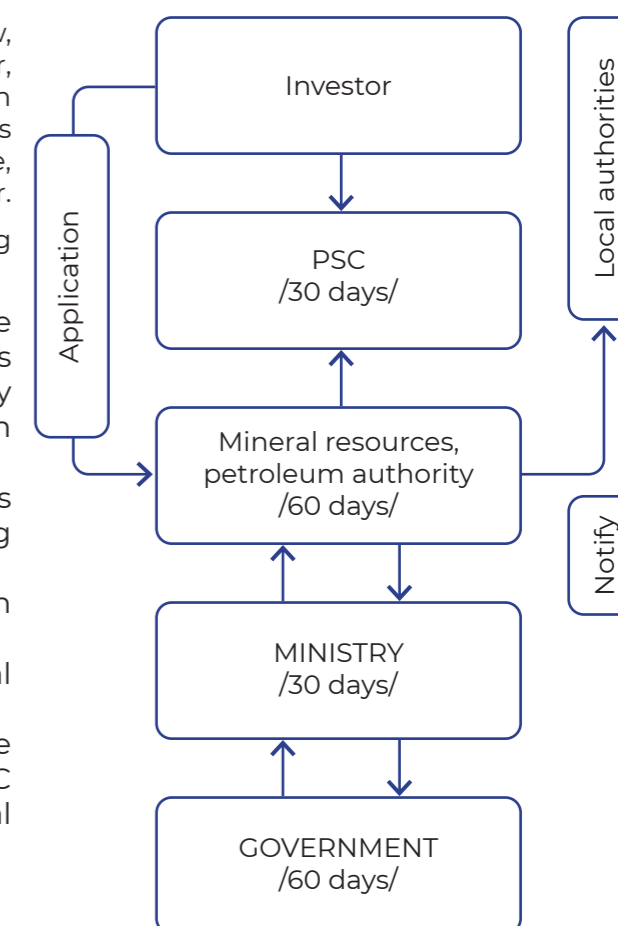
## Legal environment of product sharing contract

MMongolian petroleum policy, law, regulation, and standards are clear, transparent, and understandable in compliance with international standards and with the aim of being a sustainable, long-term legal environment in the sector.

The stages of the Production sharing contract (PSC)

- ▶ Application obtained, making the negotiation and selection processes are provided within 60 days by Mineral Resources and Petroleum Authority (MRPAM).
- ▶ The negotiated draft PSC is delivered to the Ministry of Mining and Heavy Industry (MMHI)
- ▶ MMHI monitored and its proposition delivers to the government.
- ▶ The government makes a final decision within 60 days.
- ▶ If the government approves the contract, MRPAM signs the PSC within 30 days and notifies the local government.

Total 180 days.



### PRODUCTION SHARING CONTRACT SUMMARY

#### Licence Terms

- ▶ Exploration Phase: 8 years plus two, 2-year extensions (maximum 12 years)
- ▶ Exploitation Phase: 25 years plus two, 5-year extension (maximum 35 years)

Production Split and Bonuses – negotiated.

Royalty 5% to 15% - negotiated.

Income Tax – exempt.

Oil price based on world market price for similar quality crude.

Cost Recovery of up to 40% after deducting Royalty

- ▶ All costs expensed (no depreciation) and carried forward indefinitely

#### Acreege Fees

- ▶ Exploration Phase: US\$ 3/km<sup>2</sup>, US\$ 8/km<sup>2</sup> in extension periods
- ▶ Exploitation Phase: US\$ 100/km<sup>2</sup>, US\$ 200/km<sup>2</sup> in extension periods

# Mongolian basins adjacent to proven prolific chinese basins

## STATUS EXPLORATION PRE-1990

- ▶ Field work, outcrop, and boreholes suggest source rocks occur across the country
- ▶ Focus on the Zuunbayan area with few wells drilled in other eastern basins in the 1950s
- ▶ No or very little activity from the 1960s to 1990
- ▶ Petroleum Potential of Mongolia Report collates data for the first time

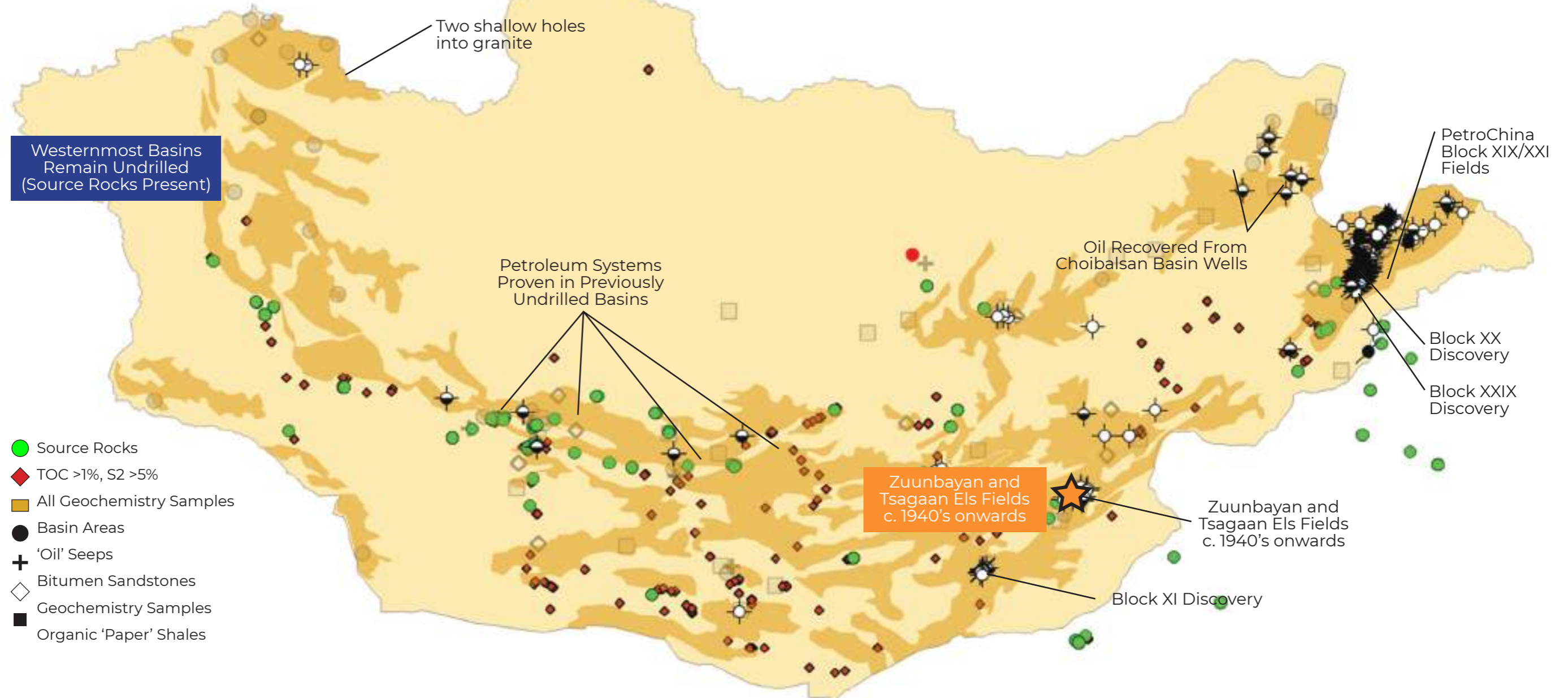
and generates international interest (BP and others do fieldwork) Source Rocks TOC >1%, S2 >5% All Geochemistry Samples Basin Areas 'Oil' Seeps Bitumen Sandstones Geochemistry Samples Organic 'Paper' Shales Westernmost Basins Remain Undrilled (Source Rocks Present) Petroleum Systems Proven in Previously Undrilled Basin

## STATUS EXPLORATION POST-1990

- ▶ Penttila's 1994 paper estimates up to ~ 6 Billion barrels of oil equivalent resources across all basins
- ▶ Soco's discoveries developed by PetroChina reached 22,500 barrels of oil per day by 2016
- ▶ Lots more fieldwork and geochemistry hint at country-wide source rock potential

- ▶ Drilling proves new accumulations and several new active petroleum systems
- ▶ Majority of basins are under-explored, especially for older plays

▶ Spectacular outcrops show clastic reservoirs well develop  
▶ Sands >10m thickness proven oil bearing



# Petroleum System Elements in and adjacent to Mongolia

In 2025, Mongolia will put into operation a plant with the capacity to process 1.5 million tons of crude oil per year. The supply of crude oil to the plant is very important.

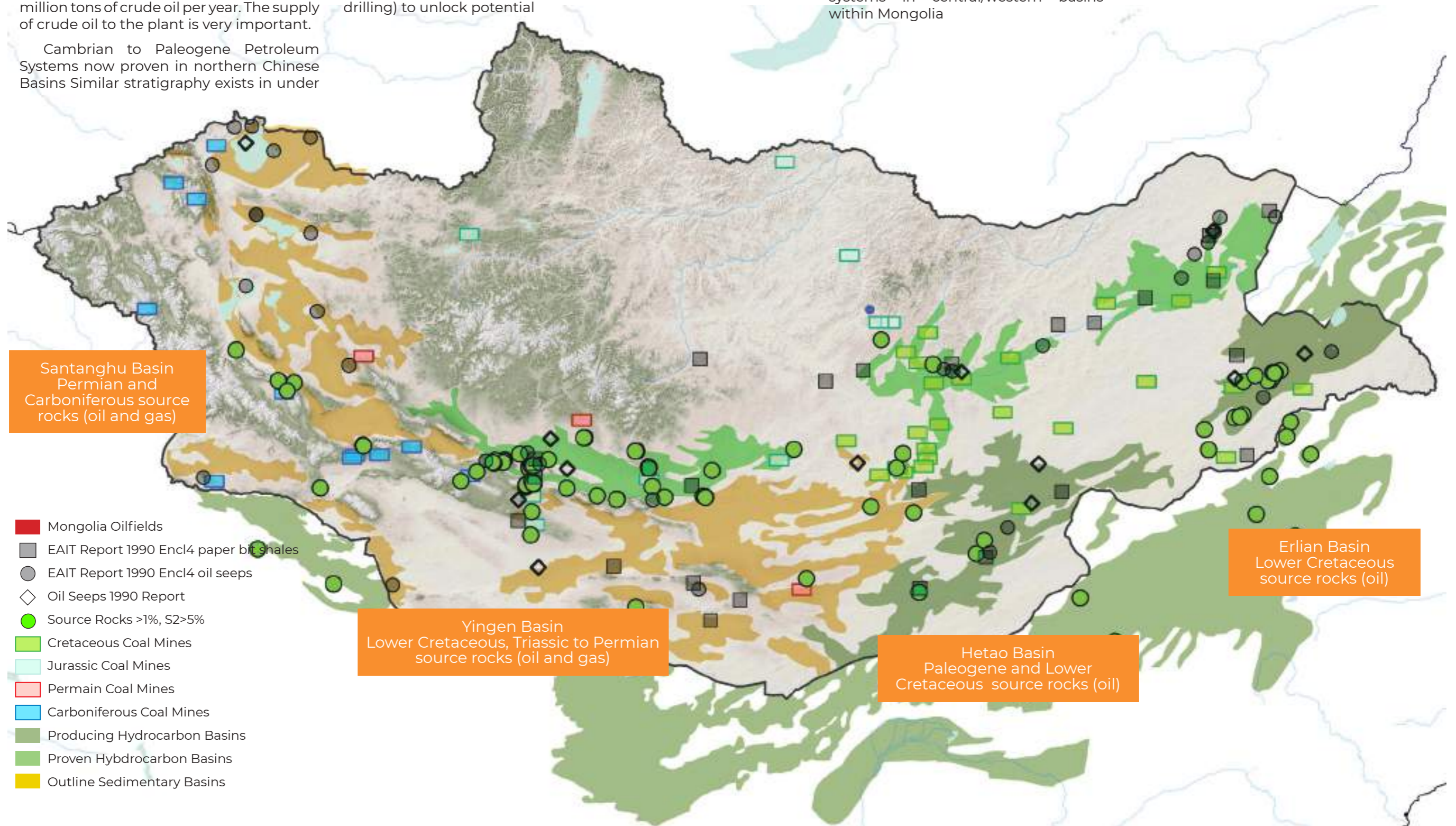
Cambrian to Paleogene Petroleum Systems now proven in northern Chinese Basins Similar stratigraphy exists in under

explored Mongolian basins Opportunity for new technologies (seismic imaging/drilling) to unlock potential

Carboniferous to Paleogene basins play an important role in and adjacent to Mongolia, where:

- ▶ Large stratigraphic range of source rocks are identified from outcrop data
- ▶ Recent wells promise active petroleum systems in central/western basins within Mongolia

- ▶ Paleozoic coal measures preserved at depth are considered a source of gas.
- ▶ Deeper/older basin are yet to be penetrated and could hold extensive unconventional mineral resources.



Santanghu Basin  
Permian and Carboniferous source rocks (oil and gas)

Erlian Basin  
Lower Cretaceous source rocks (oil)

Yingen Basin  
Lower Cretaceous, Triassic to Permian source rocks (oil and gas)

Hetao Basin  
Paleogene and Lower Cretaceous source rocks (oil)

- Mongolia Oilfields
- EAIT Report 1990 Encl4 paper bit shales
- EAIT Report 1990 Encl4 oil seeps
- ◇ Oil Seeps 1990 Report
- Source Rocks >1%, S<sub>2</sub>>5%
- Cretaceous Coal Mines
- Jurassic Coal Mines
- Permian Coal Mines
- Carboniferous Coal Mines
- Producing Hydrocarbon Basins
- Proven Hydrocarbon Basins
- Outline Sedimentary Basins

## Recent tender blocks

14 Open exploration blocks

9 Valid production-sharing contracts

4 Production blocks

6 Unconventional (Coal bed methane)

## Block X (Tukhum-north)

**Block Area:** 20,847.6 km<sup>2</sup>  
**Basin Area:** c. 6,058 km<sup>2</sup> (3 areas)  
**Restricted Areas:** 1,276 km<sup>2</sup> area is overlapped by National Park  
**Previous Operator:** Satellite geological Survey LLC  
**Award/Relinquished:** July 29, 2009 / June 23, 2020  
**Exploration Activity1:** 55242 outcrop samples of geochemical analysis, Gravity survey at 5390 point, 2D seismic survey for 1131km (2010-2011), N10-001 well TD 1982m, and N10-002 well (2011-2013)  
**Petroleum Systems:** Lwr Cretaceous/Upper Jurassic  
 Triassic  
 Permian-Carboniferous

## Block - XXIV /Dariganga/

**Block Area:** 16954.6 km<sup>2</sup>  
**Basin Area:** c. 5523.85 km<sup>2</sup> (3 areas)  
**Restricted Areas:** 261.7 km<sup>2</sup> National Park overlap  
**Previous Operator:** Mongolia Shin II Energy LLC  
**Award/Relinquished:** Feb 09, 2011 / Sep 05, 2022  
**Exploration Activity1:** Outcrop samples - geochemical analysis, 2278 points gravity, 210 km 2D seismic survey (2011)  
**Petroleum Systems:** Middle Jurassic/ Upper Jurassic  
 Upper Jurassic/Lower Cretaceous  
 Permian-Carboniferous /limited/

## Block IX (Nomgon)

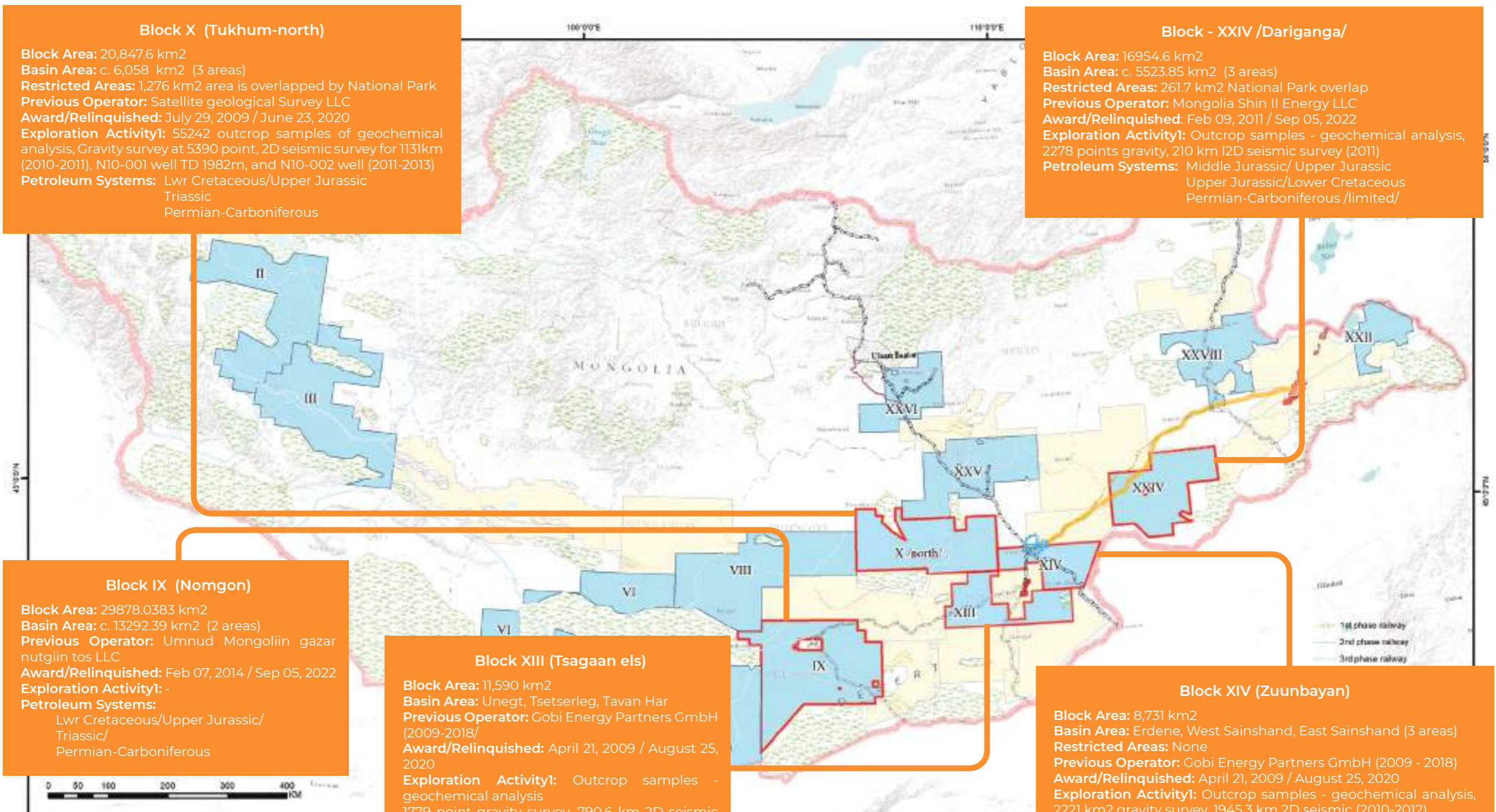
**Block Area:** 29878.0383 km<sup>2</sup>  
**Basin Area:** c. 13292.39 km<sup>2</sup> (2 areas)  
**Previous Operator:** Umnud Mongoliin gazar nutgiin tos LLC  
**Award/Relinquished:** Feb 07, 2014 / Sep 05, 2022  
**Exploration Activity1:** -  
**Petroleum Systems:**  
 Lwr Cretaceous/Upper Jurassic/  
 Triassic/  
 Permian-Carboniferous

## Block XIII (Tsagaan els)

**Block Area:** 11,590 km<sup>2</sup>  
**Basin Area:** Unegt, Tsetserleg, Tavan Har  
**Previous Operator:** Gobi Energy Partners GmbH (2009-2018/  
**Award/Relinquished:** April 21, 2009 / August 25, 2020  
**Exploration Activity1:** Outcrop samples - geochemical analysis  
 1779 point gravity survey, 790.6 km 2D seismic (2010-2012), Ger chuluu A1 well TD 1097.8 m, Ger chuluu D1 806 m (2012)  
**Petroleum Systems:** Lwr-Mid-Early Cretaceous/  
 Lwr-Mid-Upper Jurassic

## Block XIV (Zuunbayan)

**Block Area:** 8,731 km<sup>2</sup>  
**Basin Area:** Erdene, West Sainshand, East Sainshand (3 areas)  
**Restricted Areas:** None  
**Previous Operator:** Gobi Energy Partners GmbH (2009 - 2018)  
**Award/Relinquished:** April 21, 2009 / August 25, 2020  
**Exploration Activity1:** Outcrop samples - geochemical analysis, 2221 km<sup>2</sup> gravity survey, 1945.3 km 2D seismic (2010-2012),  
**Petroleum Systems:** Lwr-Mid-Early Cretaceous/  
 Lwr-Mid-Upper Jurassic



## 3

## LEGAL ENVIRONMENT

## Recent reforms in the Mineral Resources Law



No overlapping laws, gaps, or conflicts; sustainable legal environment.



Enables granting exploration licenses based on applications (not only on competitive selection).



Progressive royalty is levied on the income exceeding the income levied on the primary amount.



Increased income from local mining operations to support local development.

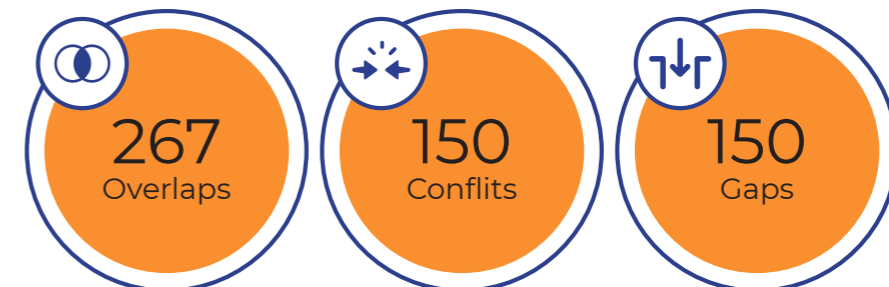


Reduced number of local permissions.



Amended tax laws and the abolition of taxes imposed on the transfer of exploration and mining licenses.

To remediate the below, the Ministry of Mining and Heavy Industry has been working on the new drafting of the relevant laws to fulfill the above.



## CONFLICTS, GAPS, AND OVERLAPPINGS IN THE LAW OF THE MINERAL SECTOR

By the order of the Ministry of Justice and Home Affairs of Mongolia A/67 from 2017, 10 laws of mineral sectors have been reviewed and the following issues have been identified.

## Regulations

The Minerals sector's legal environment is constantly improving, and the major laws related to doing business in the sector are as follows.

### MINERALS LAW /2006/

- regulate prospecting, exploration and mining of minerals within the territory of Mongolia.

### COMMON MINERALS LAW /2010/

- regulate relations with respect to exploration and mining of common minerals (widely spread construction rocks such as sand, gravel, brick clay, trap, pebble that are usable for road and building materials) and obtaining license, license holders' liabilities, and protection, rehabilitation of exploration field and mining area in use in the territory of Mongolia

### WATER LAW /2012/

- govern relations concerning the protection and rational use and restoration of water resource and its basin

### NUCLEAR ENERGY LAW /2009/

- regulate relations connected to exploitation of radioactive minerals and nuclear energy on the territory of Mongolia for peaceful purposes, ensuring nuclear and radioactivity safety, protecting population, society and environment from negative impacts of ionized radioactivity

### PETROLEUM LAW /2014/

- regulate matters pertaining to petroleum and unconventional petroleum prospecting, exploration, and exploitation within the territory of Mongolia. **Petroleum Production Law /2005/ Land Law**

### ENVIRONMENT IMPACT ASSESSMENT LAW /2012/

- regulate relations that arise in connection with the protection of the environment, prevention of the ecological misbalance, the use of natural resources, assessment of the environmental impact and decision-making on the start of a project Law on the fees for natural resources /2012/

### COMPANY LAW /2011/

- regulate relations concerning the establishment, registration and reorganization of a company, its management and organizational structure, supervisory structure, the rights and obligations of its shareholders, and its liquidation

### GENERAL LAW ON TAXATION /2008/

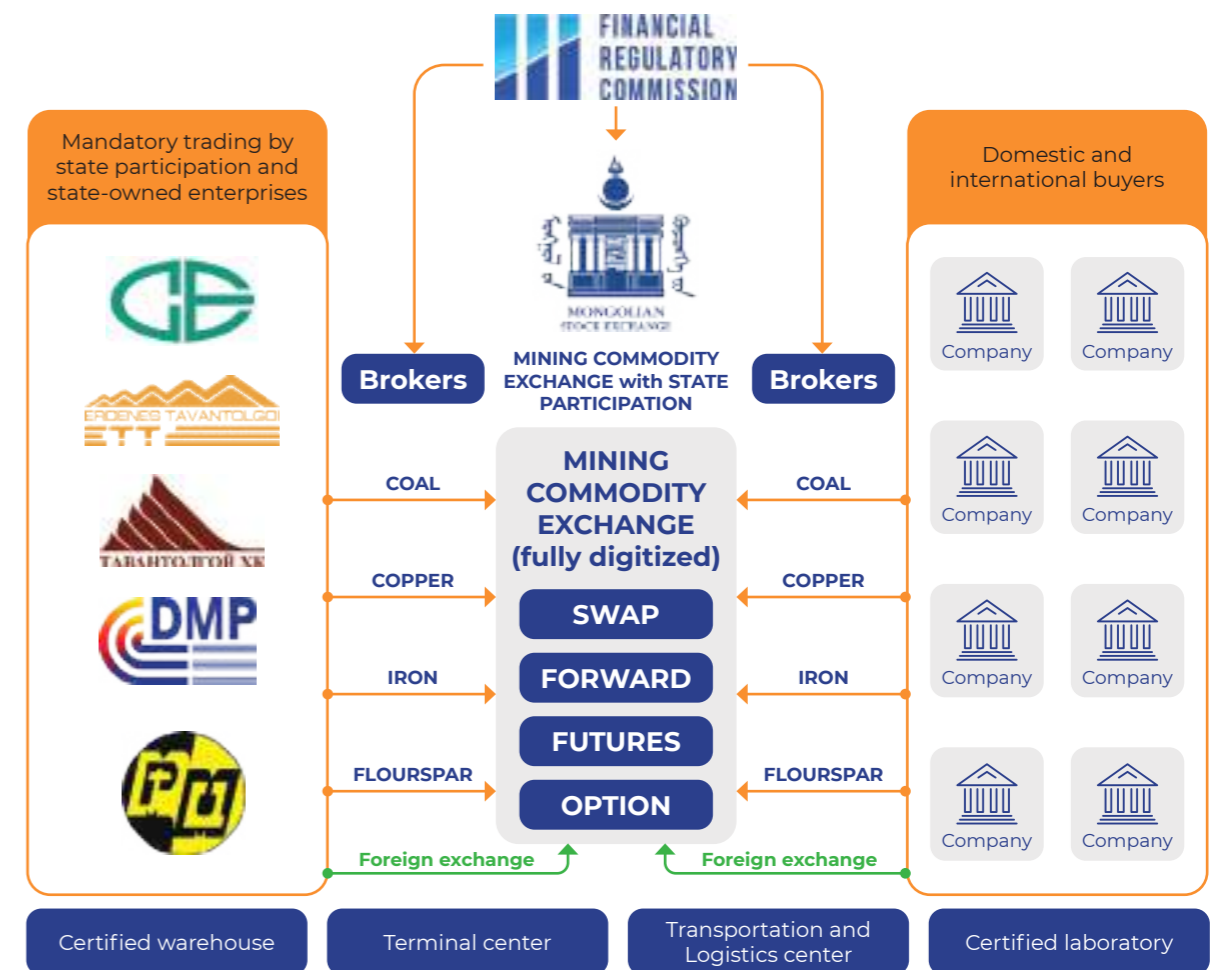
- define the tax system of Mongolia, general principles of taxes, fees, payment, also rights, obligations and responsibilities of taxpayers, legislative grounds of State Tax Administration and tax inspectors, to regulate relations arising from their implementation.

### CUSTOMS LAWS /2008/

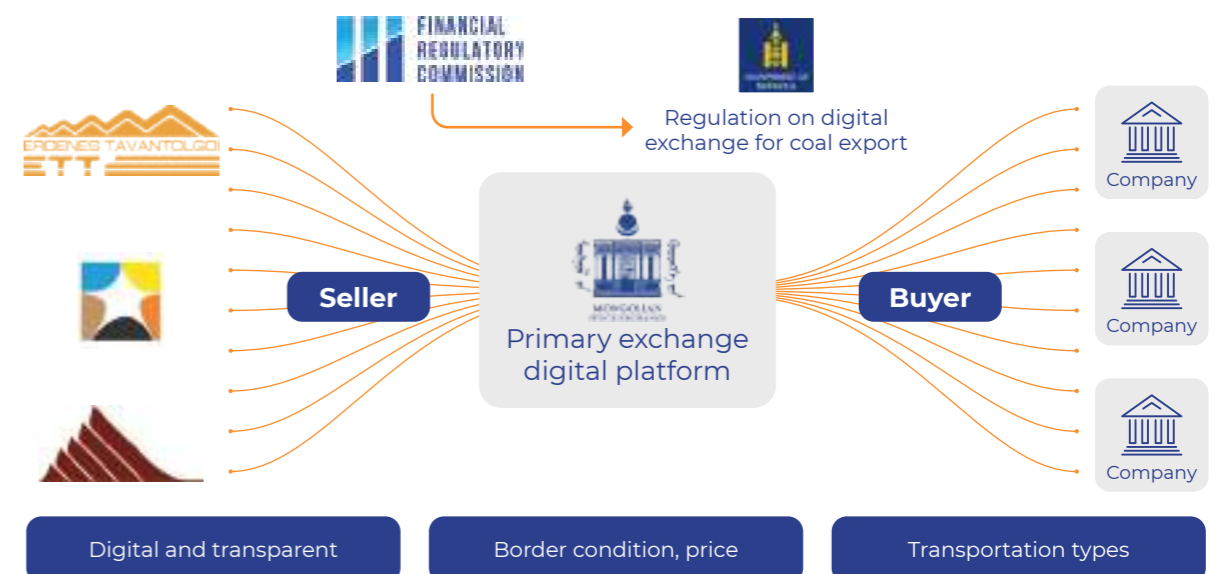
- regulate matters regarding regulations on Customs clearance and control over goods and means of transport crossing the national Customs frontier of Mongolia, as well as defining Customs procedures and their requirements, regulations on the settlement of complaints and appeals of the Customs decisions, Customs organizational structure, rights, and obligations of the Customs officers and liabilities against Customs offenses

Source: Legalinfo.mn

## LAW ON MINING COMMODITY EXCHANGE /effective from 2023/07/01/

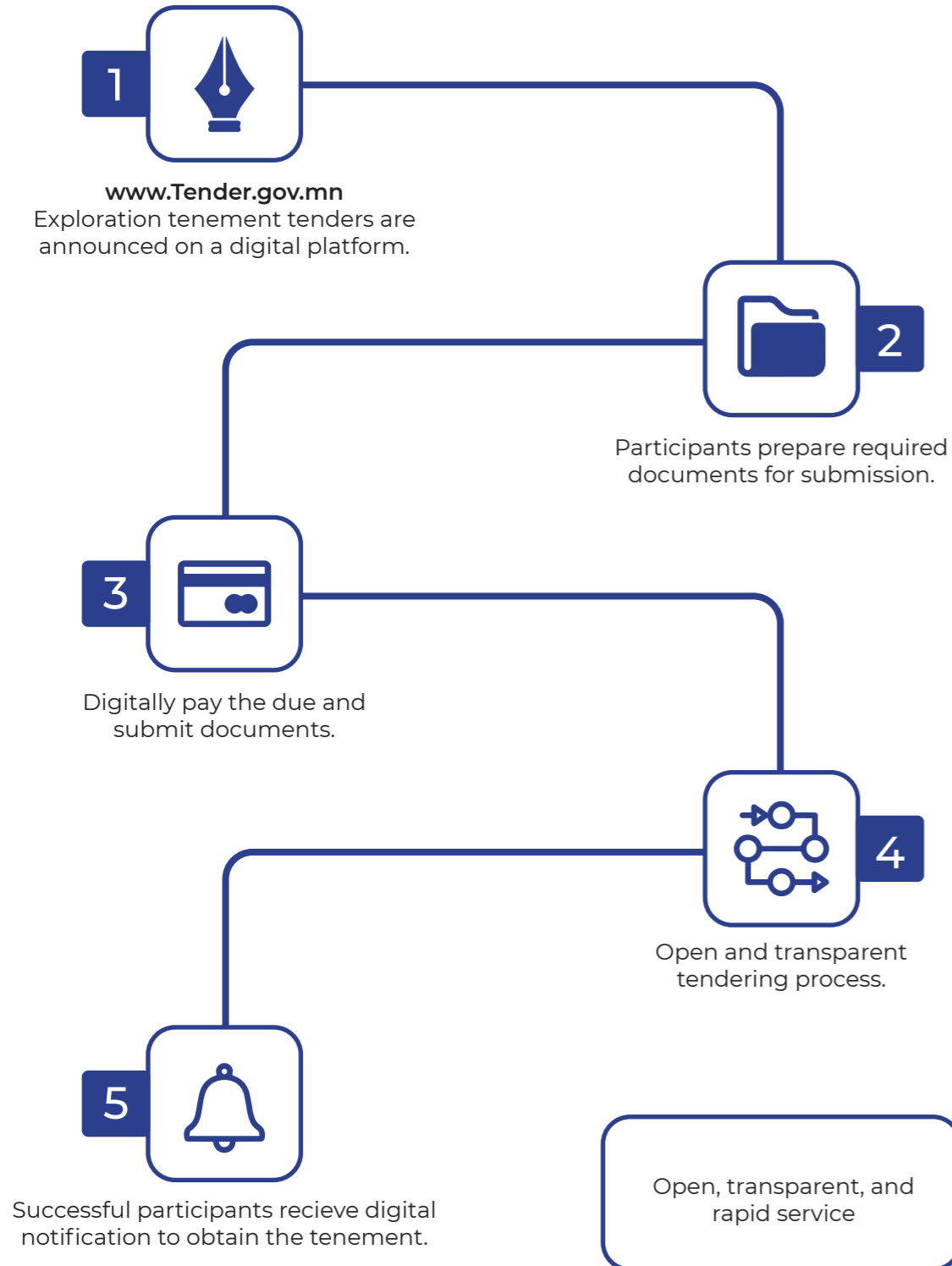


## GOVERNMENT RESOLUTION #362 DIGITAL PLATFORM FOR COAL EXCHANGE



# Applying for a minerals permit

## TENDER PROCESS



**2023:** ~ 6 million hectares of land will be offered for exploration rights.

## COMPANY TAXATION

Mongolia is continuously improving the tax environment through the government's commitment to abolishing the burdens of tax.

# Mongolia reforms its key tax legislation

Mongolia engaged in an extensive tax reform discussion over the past months. As a consequence, key tax laws including General Law on Taxation, Corporate Income Tax Law, Personal Income Tax Law, and VAT Law revised substantially by Mongolian Parliament (the legislative body), under Government's tax reform packages. The package of amendments to the laws on taxation effective from January 2020. The approved package of tax amendments includes the following changes:

### 1. General Law on Taxation:

- ▶ The tax payment deadline for companies experiencing financial difficulties extended from 2 months to 24 months.
- ▶ Taxes overpaid due to unfounded requests by tax authorities will be refunded immediately, along with the principal payment and any fines paid.
- ▶ Taxpayers who have been determined to be "no risk" taxpayers, will not be audited.
- ▶ An electronic tax registration and tax information portal with taxpayer information will be created, and services provided by tax authorities will be based on the electronic system.

### 2. Corporate Income Tax

- ▶ The license transfer tax was decreased from 30% to 10% and will now be applied to net income instead of gross income.
- ▶ The interest income of Mongolia's commercial banks for loans and debt instruments obtained from local and foreign stock markets will be taxed at 5%.
- ▶ The tax of 10% on the financing obtained through debt instruments from initial and secondary markets has been lowered to 5%.

- ▶ The statute of limitations for tax audits, as well as penalties, fines, and tax payments assessed as a result of such audits, was lowered from 5 years to 4 years.
- ▶ The interest income from loans and debt instruments of Mongolia's commercial banks from local and foreign sources will be taxed at 5%.
- ▶ International regulations aligning transfer pricing rules with OECD standards (including reporting requirements) will be implemented.

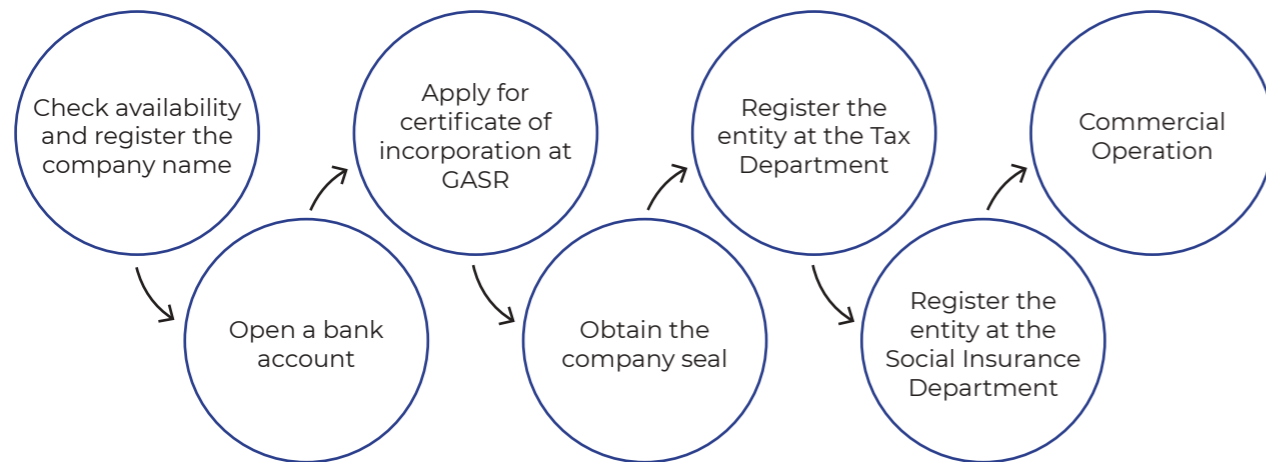
### 3. Personal Income Tax

- ▶ A flat 10% personal income tax will be applied
- ▶ Resident tax was lowered from 20% to 15%, with interest at 10%
- ▶ The tax return for first-time homeowners was raised from 3 million MNT to 6 million MNT.
- ▶ A tax credit will be given for the difference between account interest for mortgage loans and subsidized loans.

Refer to [investment-guide-2020.pdf](#) ([investmongolia.gov.mn](#)) for further details.

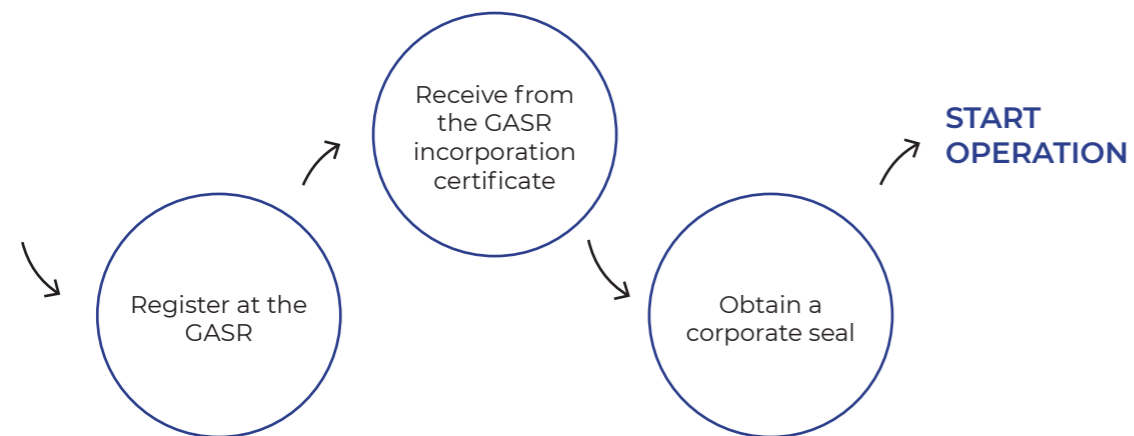
### ESTABLISHMENT PROCEDURE OF A REPRESENTATIVE OFFICE OF A FOREIGN LEGAL ENTITY

The incorporation of a new business entity with foreign investment (BEFI) in Mongolia takes place at the General Authority for State Registration of Mongolia /GASR/.



### ESTABLISHMENT PROCEDURE OF A REPRESENTATIVE OFFICE OF A FOREIGN LEGAL ENTITY

The establishment of a new representative office of a foreign legal entity in Mongolia register at the General Authority for State Registration of Mongolia /GASR/.



Refer to investment-guide-2020.pdf  
([investmongolia.gov.mn](http://investmongolia.gov.mn)) for further details.

Source: Boroo deposit, Ikh Dashir Valley.  
Pit 6 Rehabilitation, 2008 and 2009

INTRO TO ACTIVE MINING  
PROJECTS IN COPPER  
AND COKING COAL



# ERDENET MINING CORPORATION

## STATE-OWNED ENTERPRISE



**VISION**  
World standard,  
Pride of Mongolia



**MISSION**  
We ensure sustainable development,  
responsible mining and create national wealth



### POLICY OF SUSTAINABLE DEVELOPMENT

1. Technological policy
2. Technical policy
3. Economic and finance-accounting policy
4. Social and human development policy
5. Environmental policy

### HISTORY IN BRIEF

Erdenet Mining Corporation SOE is located in the city of Erdenet, Orkhon province, in the central part of Mongolia situated in Asia. The copper-molybdenum reserve "Erdenetiin ovoo" is located 340 km to the north-west of Ulaanbaatar; 180 km to the west of Darkhan city; 60 km to the north-east from the center of Bulgan province; and 140 km from the border of the Russian Federation.

As a result of the implementation of the above projects and programs provided in the guidelines of development:



1,000 new jobs will emerge



Ore processing capacity will increase up to 40 million tons by 2024



Ore extraction cost up to 20 percent and ore processing cost up to 10 percent will be reduced



End products with value added cost will be produced



Revenue from sales will be reached 5 trillion tugriks in 2024 and 11.4 trillion tugriks in 2026



The level of profitability and competitiveness of EMC will be increased and conditions for long-term stable operation in the long run will be stipulated



## SIZABLE COKING COAL RESOURCES AND RESERVES BASE

Mongolian Mining Corporation (“MMC” or the “Company”; SEHK Stock Code: 975) is a high-quality coking coal producer and exporter in Mongolia. The Company owns and operates two open-pit coking coal mines - Ukhaa Khudag and Baruun Naran, both located in Umnugobi aimag of Mongolia.

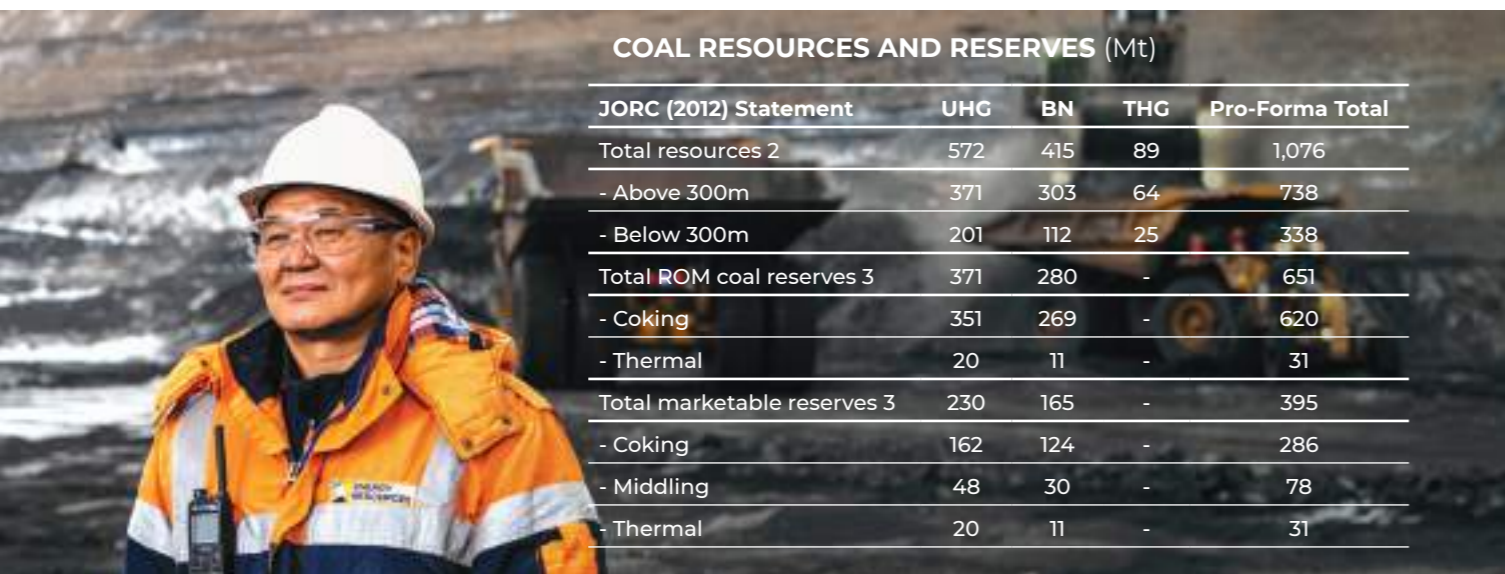
MMC is majority owned by MCS Group, the largest holding group in Mongolia, and is currently one of the largest and most advanced private mining companies in the country.

MMC’s operations have grown rapidly from a green-field project in 2009 to a world-standard mining complex to date. With its premium quality coal

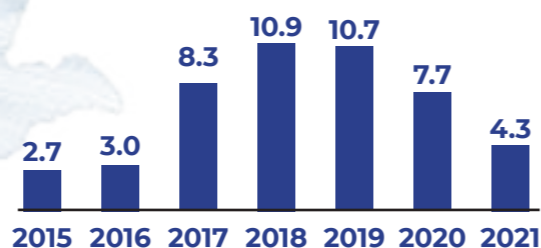
products, international standard project development and effective management practices, the Company has already secured its position as the largest producer and exporter of washed coal in Mongolia.

In 2010, after only one year of fast-paced operations, the Company was successfully listed on the main board of Hong Kong Stock Exchange, making it the first Mongolian company to offer its shares internationally.

With integrated coal mining operations combined with leading edge technologies, MMC was able to reach the quickest ramp-up of mining operations in the country based on the best international practices.



### ROM COAL PRODUCTION (Mt)



TSX:ERD | OTC:ERDN | MSE:ERDN  
www.erdene.com

## Developing the Khundii Minerals District in Southwest Mongolia

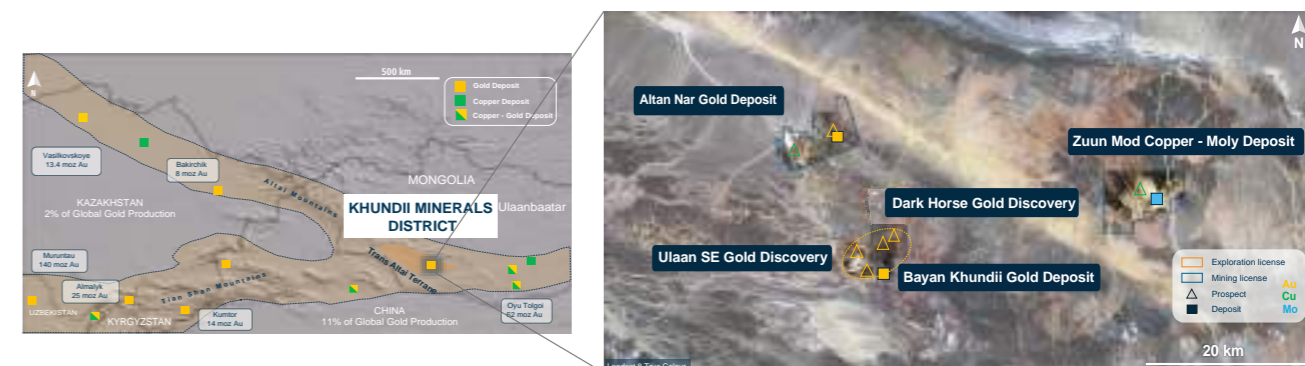
Erdene Resource Development Corporation (TSX: ERD | OTC: ERDCF | MSE: ERDN) is focused on the acquisition, exploration, and development of large, high-grade, near surface, precious and base metals deposits in southwest Mongolia.



Erdene has interests in three mining licenses and an exploration license in southwest Mongolia, where exploration success has led to the definition of the Khundii Minerals District. The Company is advancing its high-grade, open-pit Bayan Khundii gold project to production, while expanding resources in the Khundii Minerals District.

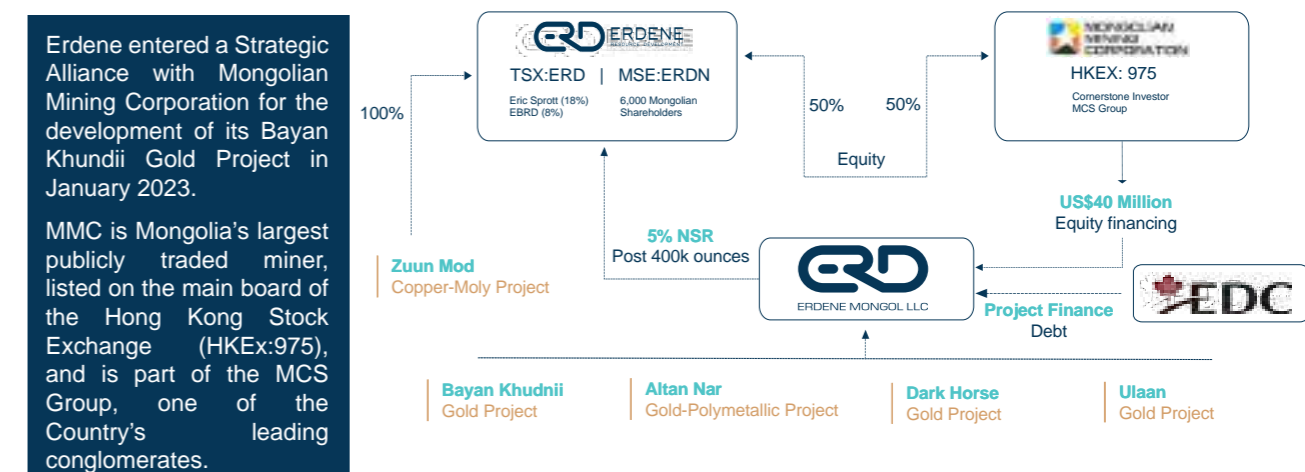
First mover in unexplored portion of a prolific world-class gold belt	Discovered multiple high-grade, near-surface gold deposits and prospects with district scale potential	Shovel ready high-grade open-pit Bayan Khundii Gold Project	Strategic Alliance with Mongolian Mining Corporation, Mongolia's leading private miner	100% interest in the Zuun Mod Molybdenum- Copper deposit, one of Asia's largest undeveloped Cu-Mo resources	Stable shareholders base and support of leading institutions, including Eric Sprott and the EBRD
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## First Mover in an Unexplored Portion of a Prolific Gold-Copper Belt



## Strategic Alliance with Mongolian Mining Corporation

Combining Mongolia’s pre-eminent metals explorer with an exceptional national mining partner



Erdene entered a Strategic Alliance with Mongolian Mining Corporation for the development of its Bayan Khundii Gold Project in January 2023. MMC is Mongolia’s largest publicly traded miner, listed on the main board of the Hong Kong Stock Exchange (HKEx:975), and is part of the MCS Group, one of the Country’s leading conglomerates.



# MONGOLIA'S PREMIER PRECIOUS METALS COMPANY

TSX: **STGO** OTCQX: **STPGF**

[www.steppegold.com](http://www.steppegold.com)

## Altan Tsagaan Ovoo (ATO) Gold Mine

Fully permitted and commenced  
gold production in 2020

**Phase 1:**  
Steady & growing  
production from oxide  
heap leach operation

**Phase 2:**  
Under development;  
**Targeting 100k oz  
of gold per annum;**  
+12.5-mine life

**Aggressive exploration  
& acquisition programs  
are planned**



**Scholarships  
+1,600 for Mongolian  
students, 100% Local  
procurement**

**Recycling 98% of  
water waste;  
Achieves 92.9  
implementation score  
on Environmental  
Management Plan**

**Uudam Khundii (UK)  
exploration project in  
highly perspective  
area**

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Toronto, ON M5H 3V9, Canada  
Tel: +1 647 807 0577



Set up in 2009, Suuri Tur LLC is a Mongolian company with history of 13 years of reliable experience for providing industrial equipment, construction materials, spare parts and services to Mongolian mining industries. Suuri Tur LLC has always believed in delivering equipment at the forefront of advanced technology.

We are proud to be an authorized distributor of the worldwide leader in fluid handling, Graco. We also distribute finest industrial equipment of Danfoss, Cattini, Solaft Filtration Solutions, Grundfos, Proto Tools, Maudlin Products in Mongolia. We are experienced in HVAC system installation, pump and motor repair, equipment rentals.

Since 2021, our company has been successfully launching projects in construction field such as building houses, warehouse and workshops within Ulaanbaatar and provinces.

Our commitment to delivering customer satisfaction drives everything we do as a business.



### CONTACT US

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Email: [info@suuritur.mn](mailto:info@suuritur.mn)

Website: [www.suuritur.mn](http://www.suuritur.mn)

## Kharmagtai Copper-Gold Project



The Kharmagtai mineral complex is located in Omnogovi Province, approximately 420km southeast of Ulaanbaatar. It is located within the South Gobi porphyry copper province hosting well known deposits such as Oyu Tolgoi copper-gold operations (120km south), the Tsagaan Suvarga porphyry copper-molybdenum development (170km east) and Xanadu's Oyut Ulaan porphyry copper-gold exploration project (260km northeast).

The Kharmagtai project includes a 1.1 billion tonne Mineral Resource and a Scoping Study confirming strong project economics with a 4-year payback and 20% IRR. A Pre-Feasibility Study will commence in 2024 along with continued discovery exploration, funded by US\$35M from a strategic partnership with Zijin Mining. The PFS will deliver a maiden Ore Reserve, uplifted economics, and a financial investment decision (FID). Initial production of copper-gold concentrate is expected late 2027, at which point Kharmagtai will be a globally significant, low-cost Mongolian producer of copper and gold.

### Company profile

#### Ownership:

Kharmagtai is owned by **Mongol Metals LLC** (90%) and **QGX Ltd** (10%). Mongol Metals is majority owned by **Xanadu Mines Ltd** (85%) and **Ganbayar Lkhagvasuren** (15%). Since 2013, Xanadu Mines has operated exploration programs at Kharmagtai.

#### Mineral Resource:

1.1Bt containing 3Mt Cu & 8Moz Au, including a >100Mt higher-grade zone

#### Scoping Study and PEA:

Open pit mine, 30-yr life; US\$630M NPV; 4-yr payback & 20% IRR, producing 50ktpa copper & 110kozpa gold

#### Zijin Strategic Partnership:

Three phase investment with first phase completed. Detailed JV and placement agreements are being completed for shareholder vote.

- Phase 1 (completed) = A\$5.6M cash at 4cps (38% premium) for 9.9% of Xanadu.
- Phase 2 = A\$5.7M cash to increase to 19.99% of Xanadu.
- Phase 3 = US\$35M cash invested in 50-50 JV that controls Kharmagtai

We are pleased to invite you to  
The Mongolian Mining Week 2023

See you in Mongolia



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**MININGWEEK**  
Уул уурхайн долоо хоног

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