

# MINING INDUSTRY OF KAZAKHSTAN

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EXPORT-ORIENTED METALS

June 2024

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# INTRODUCTION

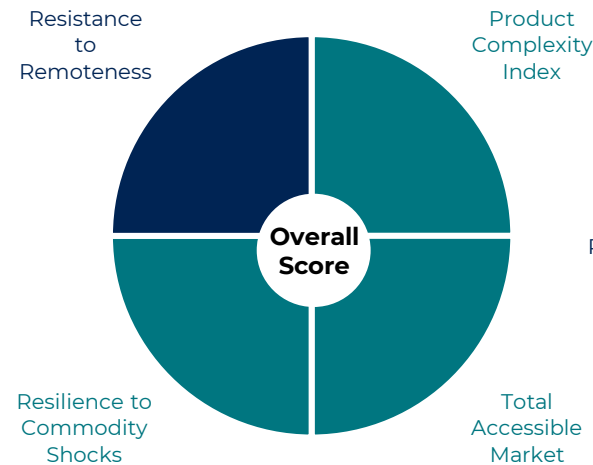
- Global demand for critical minerals has been growing significantly and this trend is expected to continue. There are various estimates on by how much the demand for critical minerals will grow depending on the scenario, but it is obvious that the global demand growth will be significant, mainly driven by energy transition and booming EV market.
- In the Net Zero Emissions scenario, by 2040, global demand by clean technologies for copper is forecast to grow by 3.6 times, lithium – by 16 times, nickel – by 9.5 times, rare earth elements – 5.4 times, zinc – by 2.9 times.
- Meeting the growing demand for critical minerals has several challenges due to geopolitical, trade and economic risks; price volatility; heavy reliance on a few countries; and more projects on critical minerals are needed for the Net Zero Emission Scenario.
- Kazakhstan has abundant resources, including those critical for low carbon development. Kazakhstan ranks 11<sup>th</sup> in terms of copper reserves globally, 7<sup>th</sup> in terms of zinc reserves, 11<sup>th</sup> in terms of bauxite (aluminium) reserves, 8<sup>th</sup> in terms of lead reserves. Kazakhstan also has great untapped potential in terms of lithium, nickel, and rare earth metals.
- Although Kazakhstan has been exporting critical minerals, there is significant potential to increase the current exports and start exporting new metals.
- Kazakhstan can ensure the uninterrupted supply of critical minerals and help meet the growing global demand. Kazakhstan plans to be not only a supplier of critical raw materials but also an integral part of the supply chain with certain processes carried out in the country. This requires actively engaging the private sector – both domestic and foreign. The private sector, including foreign investors, can help with technologies, exploration, and processing.
- Kazakhstan has always been interested in working with the private sector and foreign countries on critical raw materials. Since 2005, around 16.4% (\$67 billion) of cumulative FDI to Kazakhstan has been related to metals, which also includes critical minerals.
- The country is currently implementing a wide range of measures aimed at creating favourable environment for the private sector, including by simplifying the processes related to licensing and permitting, increasing the area of geological coverage from 1.5 sq. kilometres to 2.2 sq. kilometres, providing the companies which invest in geological exploration the priority right to develop the discovered deposits.
- Kazakhstan is also working on the digitalisation of the processes in the mining industry, improving the accessibility of data on prospective mineral deposits, as well as providing services to investors via “a single window” format. It is aimed to reduce the amount of time and procedures needed for approval twice.

# SURVEY ON KAZAKHSTAN'S ECONOMIC COMPLEXITY

- **Metals considered** in the Overview are derived from the results of the report **on Kazakhstan's economic complexity** that was developed by AIFC and Harvard Growth Lab.
- The report constituted list of product recommendations including two groups: **existing products** as exports to be expanded, and **new and nascent products** as exports to be developed. The two groups are classified if the products' share in Kazakhstan's exports exceeds global average, i.e. the product's share in global trade. Later, products were assessed on **feasibility factors** and **attractiveness factors** (normalised by z-score) and those with highest overall score were selected.
- Excluding ferrous metals, the report classifies **copper, zinc, aluminium, silver, and lead** as metals in which Kazakhstan has a revealed comparative advantage and should promote and facilitate the increase of its exports. **Gold, nickel, and rare earth metals and lithium** are identified as new or nascent exports of Kazakhstan that may benefit the country in the global market.
- For each mentioned metal, the Overview summarises global demand and production, price forecasts, Kazakhstan's major deposits and recent investment projects, and the country's position in global markets.

$$\text{Revealed Comparative Advantage (RCA)} = \frac{\text{Product's Share in Kazakhstan's Exports}}{\text{Product's Share in Global Trade}}$$

**RCA > 1**  
Existing Products



*copper zinc aluminium  
silver lead*

**RCA < 1**  
New and Nascent Products



*gold nickel lithium  
rare earth metals*

Sources: *Industry Targeting Dashboard, Atlas of Economic Complexity*

# KAZAKHSTAN'S EXPORTERS BY EXPORTED METALS

## EXPORTING MORE THAN ONE OF THE SELECT METALS:

	COPPER	ZINC	ALUMINUM	SILVER	LEAD
KARAGANDY PLANT NONFERROUS METAL-ROLL AND STEEL LLP	+	+	+		+
KAZZINC LLP	+	+			+
KAZAKHMYN CORPORATION LLP	+			+	
VOSTOKCVETMET LLP	+			+	
UMP JSC	+		+		
ZOCM JSC	+				+

## GOLD:

AK ALTYNALMAS JSC  
 AKSU TECHNOLOGY LLP  
 ALEL JSC  
 ALTYNALMAS TECHNOLOGY LLP  
 CENTRAL ASIA MINING CO LLP  
 GMK ALTYN MM LLP  
 GOLDEN COMPASS CAPITAL JSC  
 KAZAKHALTYN LLP  
 KAZAKHALTYN TECHNOLOGY LLP  
 KEN TOBE LLP  
 NORTH KAZAKHSTAN METALLURGICAL COMPANY LLP  
 VIZOL LLP

## COPPER:

ASIAMETCOM LLP  
 CAPITAL-CASTING LLP  
 CARAVAN RESOURCES LTD  
 CASTING LLP  
 COPPER COMPANY KOUNRAD LLP  
 GRK MLD LLP  
 KAZ MINERALS AKTOGAY LLP  
 KAZFERRO LLP  
 SARY-ARKA COPPER PROCESSING LLP

## ZINC:

COMPANY WDA LLP

## ALUMINIUM:

ALUGAL LLP  
 ALUMINIUM OF KAZAKHSTAN LLP  
 C.F LLP  
 GIESSENHAUS LLP  
 GRANAT I K LLP  
 KAZAKHSTAN ALUMINIUM SMELTER JSC  
 QAZMETSERVICE LLP  
 ZHUK TASYMALDAU COMPANIASY LLP

## LEAD:

CSEVERNY POTOK-SK LLP  
 PROMZASHITA LLP

Source: *Analytical Portal on Kazakhstan's Foreign Trade by the Development Bank of Kazakhstan*

# EXISTING PRODUCTS



# 1. COPPER





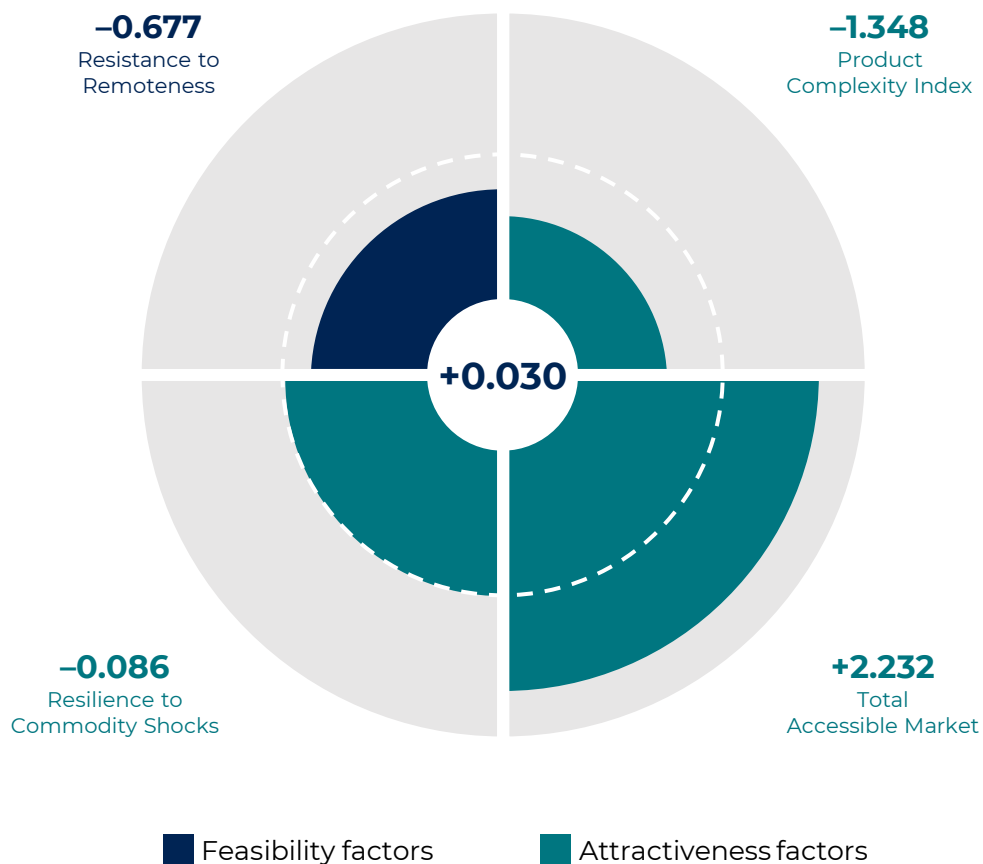
# COPPER (HS 7403)

- Copper has a low product complexity index, but a large total addressable market. Copper is averagely resilient to oil shocks and moderately sensitive to physical distance of export destination.
- Kazakhstan's share in the global market of copper is almost 4%. In 2023, Kazakhstan had the 11th largest reserves in the world with 20 million tonnes and the 11th largest mine production with 600 thousand tonnes.
- Global annual demand for copper is expected to increase from current 26 million tonnes to 31-36 million tonnes by 2030 and to 36-40 million tonnes by 2050.
- Global prices for copper are expected to be stable for the next 5 years.
- Kazakhmys and KAZ Minerals are owners of the biggest copper mines in Kazakhstan: Zhezkazgan and Nurkazgan, Aktogay and Bozshakol mines.
- In 2022, top-3 destinations of Kazakhstan's exported copper were China, Türkiye, and the UAE that constitute about 85% of Kazakhstan's copper exports.
- While China is the biggest global importer of copper, Kazakhstan's share in China's imports is around 7%. Kazakhstan's share in Türkiye's and the UAE's imports are 19% and 13%, respectively.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT

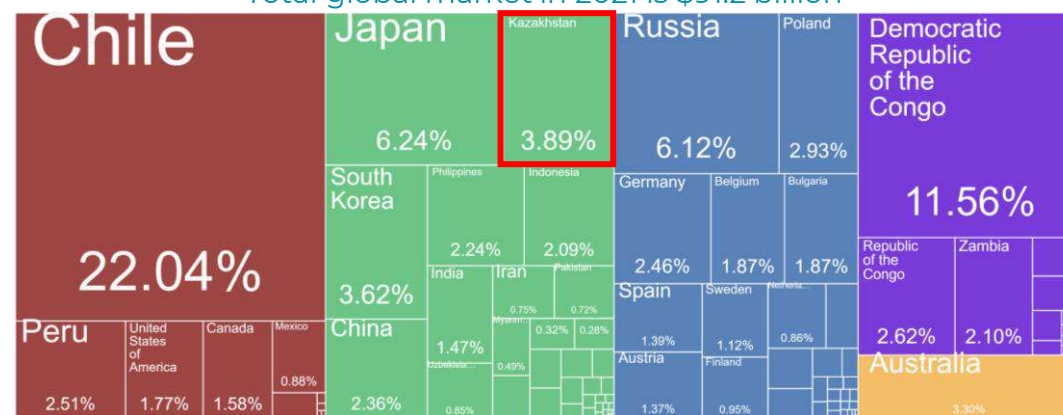
## REFINED COPPER AND COPPER ALLOYS (HS 7403) (Existing Products)

White dash line shows  
medium (zero) level



## SHARES OF EXPORTERS IN THE GLOBAL COPPER MARKET, 2021

Total global market in 2021 is \$91.2 billion



Kazakhstan's share in global exports – 3.89%

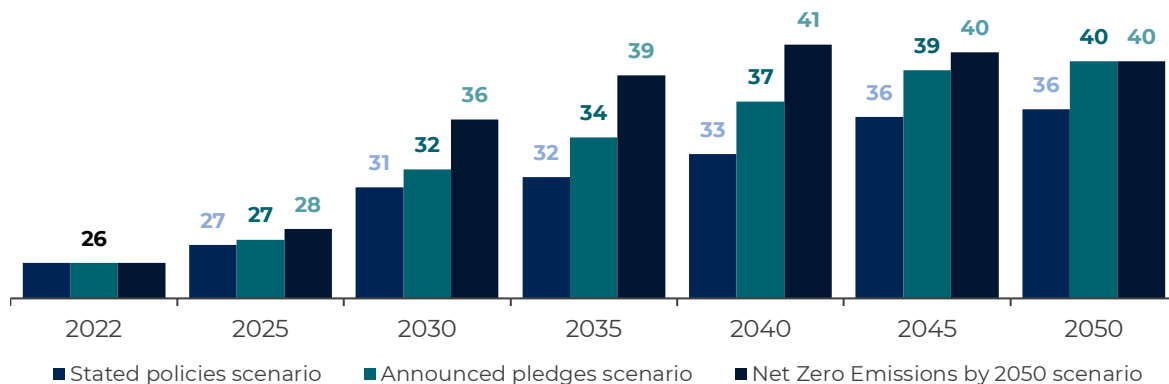
### HS codes:

- 740311 Copper; refined, unwrought, cathodes and sections of cathodes
- 740312 Copper; refined, unwrought, wire-bars
- 740313 Copper; refined, unwrought, billets
- 740319 Copper; refined, unwrought, n. e. c.
- 740321 Copper; copper-zinc base alloys (brass) unwrought
- 740322 Copper; copper-tin base alloys (bronze) unwrought
- 740329 Copper; copper alloys n. e. c.
- 740200 Copper; unrefined, copper anodes for electrolytic refining
- 740100 Copper mattes; cement copper (precipitated copper)

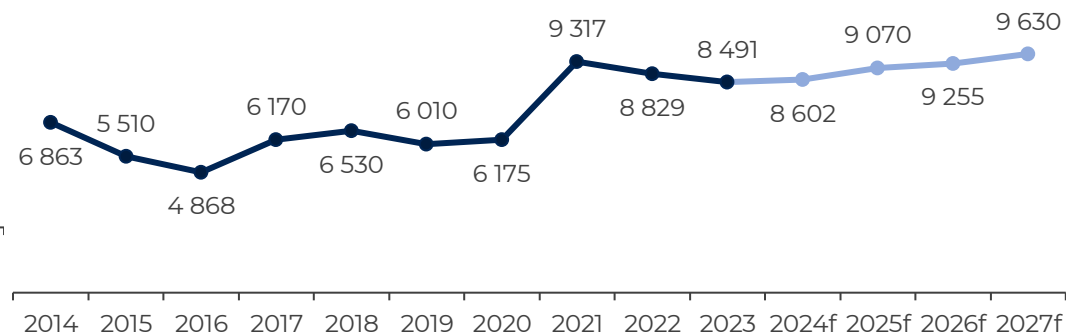
Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

# COPPER – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**GLOBAL COPPER DEMAND BY SCENARIO, 2022-2050**  
(million tonnes)



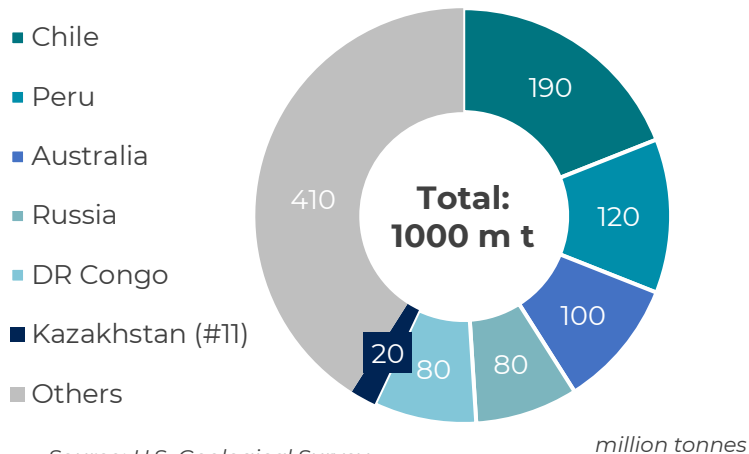
**HISTORIC AND FORECAST COPPER PRICE, 2014-2027**  
(nominal \$US/tonnes)



Source: *International Energy Agency*

Source: *FRED, S&P Global*

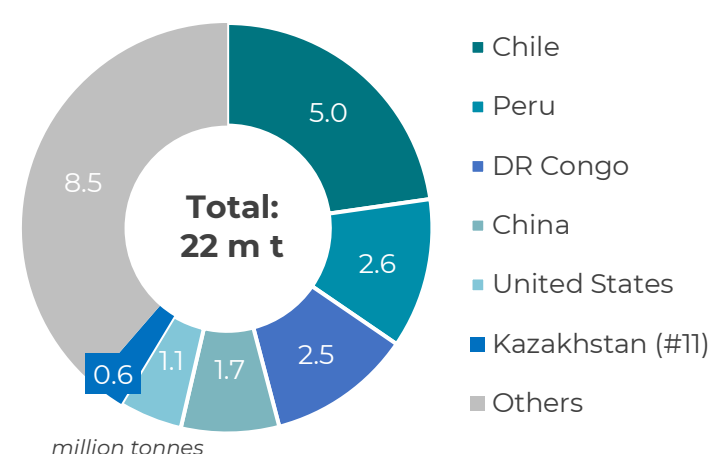
**GLOBAL COPPER RESERVES IN 2023**



Source: *U.S. Geological Survey*

- Chile is the global leader in terms of copper reserves and mine production.
- In 2023, Kazakhstan had the **11<sup>th</sup> largest** reserves in the world with 20 million tonnes and the **11<sup>th</sup> largest mine production** with 600 000 tonnes.
- According to a study of U.S. Geological Survey, total global **resources** in 2015 contained 2.1 bn tonnes.

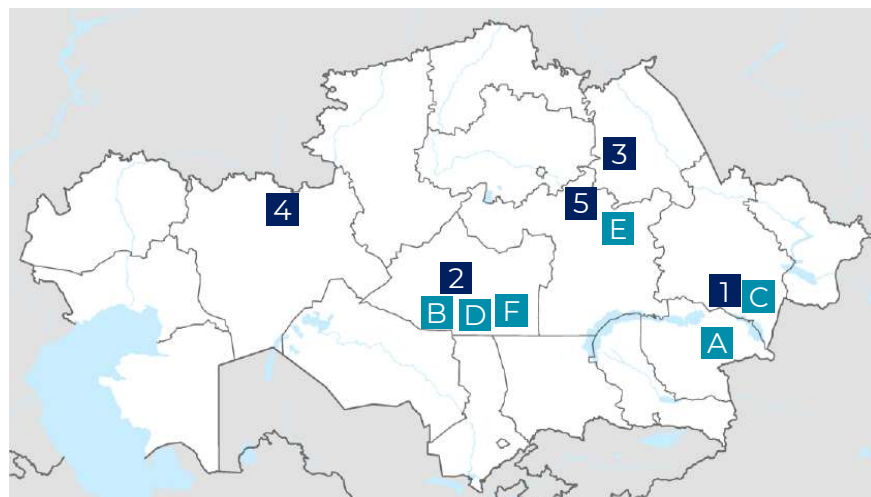
**GLOBAL COPPER MINE PRODUCTION IN 2023**



million tonnes

# COPPER – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S COPPER MINES AND PROJECTS



### KAZAKHSTAN'S 5 LARGEST COPPER MINES BY PRODUCTION:

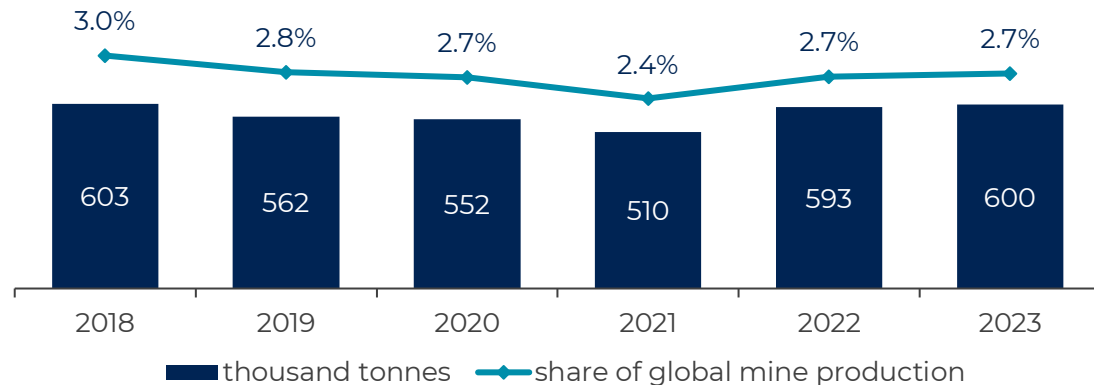
1. Aktogay Mine (230 thousand tonnes) KAZ Minerals
2. Zhezkazgan Mine (171 thousand tonnes) Kazakhmys
3. Bozshakol Mine (105 thousand tonnes) KAZ Minerals
4. 50 Let Oktyabrya Mine (38 thousand tonnes) Russian Copper Co.
5. Nurkazgan Mine (25 thousand tonnes) Kazakhmys

Source: [mining-technology.com](http://mining-technology.com)

#	Investment project	Timeline	Jobs to be created	Project cost \$million
A.	Processing and enrichment of copper	2023–2026	1500	2 200
B.	Construction of a copper production plant	2020–2024	300	54
C.	Construction of a cathode copper production plant	2021–2026	311	30
D.	Construction of a pilot plant for hydrometallurgical processing of blister copper concentrates	2016–2023	97	16
E.	Construction of a factory for the production of copper concentrate at the Kamkor deposit	2021–2023	150	9
F.	Modernisation with gasification of the Zhezkazgan copper smelter for the production of copper on the basis of the Zhaman-Aibat deposit	2021–2023	24	3

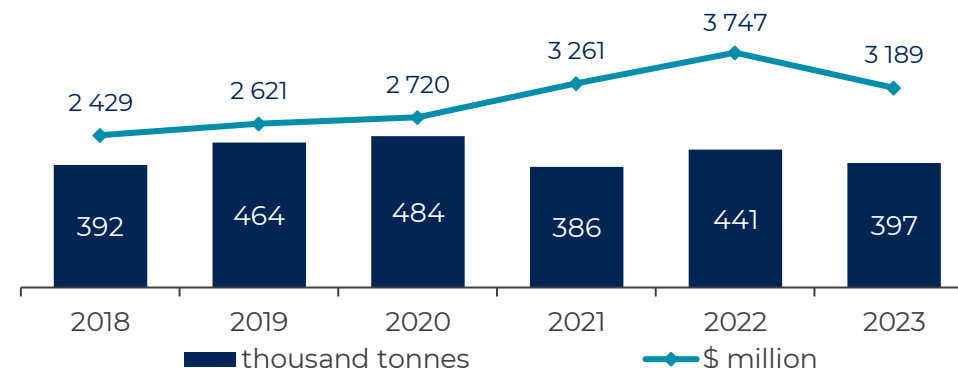
Source: [Kazakh Invest](http://Kazakh Invest)

## KAZAKHSTAN'S COPPER MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](http://U.S. Geological Survey, Mineral Commodity Summaries)

## KAZAKHSTAN'S EXPORTS



Source: [Kazakhstan's Bureau of National Statistics](http://Kazakhstan's Bureau of National Statistics)

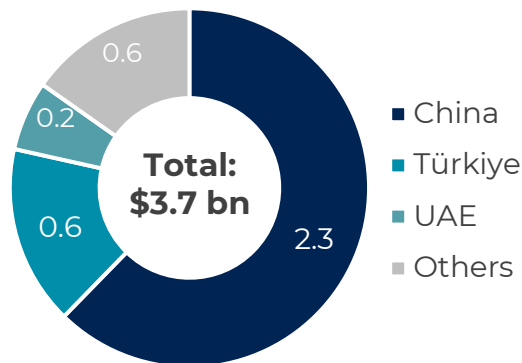
# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF REFINED COPPER IS 3.89%

**KAZAKHSTAN'S TOP-3 COPPER IMPORTERS, 2022**

China, Türkiye, and the UAE constitute 85% of Kazakhstan's copper exports.

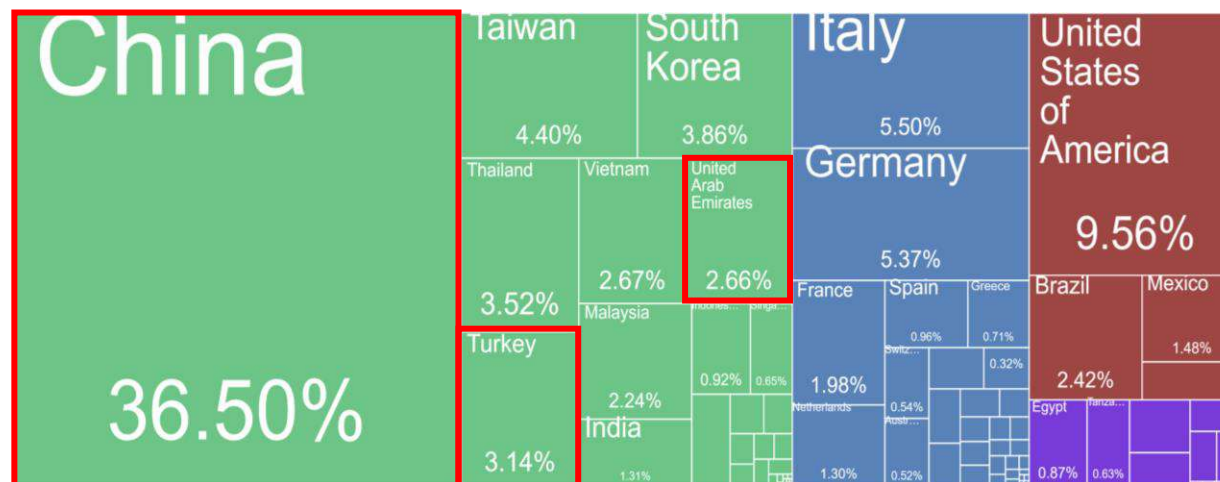
Kazakhstan holds strong positions in its top exporting markets.

While China is the largest global copper importer, Türkiye and the UAE has a share of around 3% in global imports.

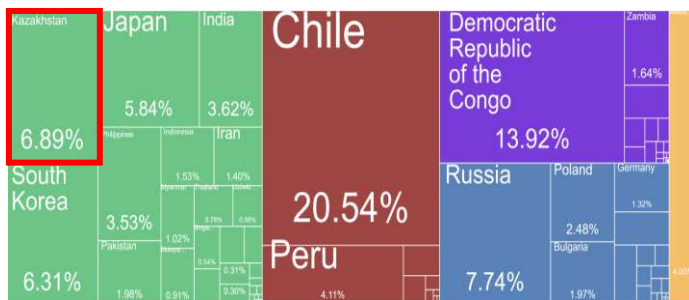


**SHARES OF IMPORTERS IN THE GLOBAL COPPER MARKET, 2021**

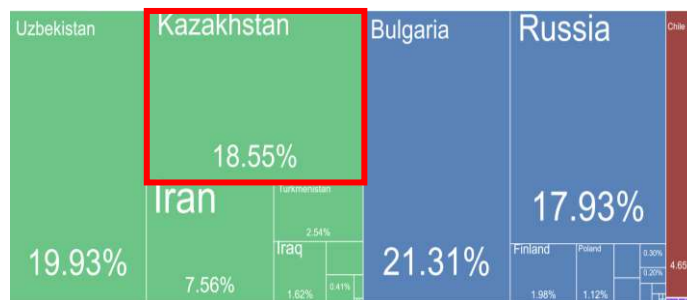
Total global market in 2021 is \$91.2 billion



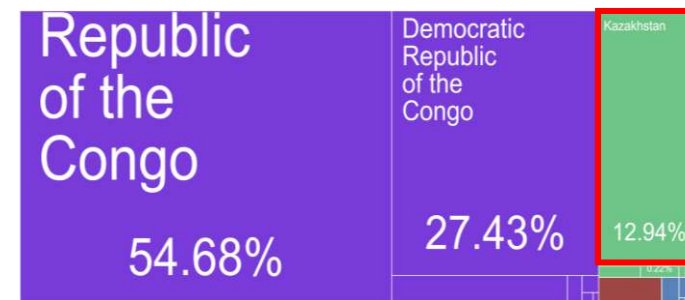
**CHINA'S COPPER IMPORTS IN 2022 WERE \$37.1 BN**



**TÜRKIYE'S COPPER IMPORTS IN 2022 WERE \$3.6 BN**



**UAE'S COPPER IMPORTS IN 2022 WERE \$3.3 BN**



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

## 2. ZINC



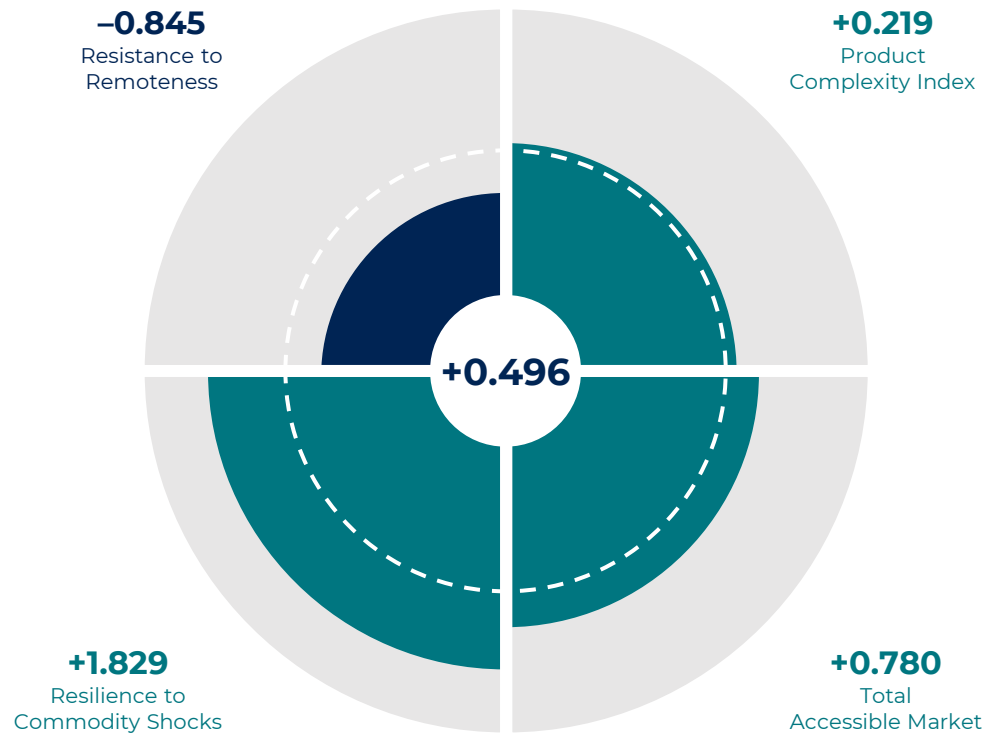
# ZINC (HS 7901)

- Zinc has an average product complexity index and a medium total addressable market. Zinc is highly resilient to oil shocks and moderately sensitive to physical distance of export destination.
- Kazakhstan's share in the global market of zinc is almost 5%. In 2023, Kazakhstan had the 7th largest reserves in the world with 6.7 million tonnes and the 8th largest mine production with 330 000 tonnes.
- Global annual demand for zinc is expected to increase from current 17 million tonnes to almost 20 million tonnes by 2028. Global prices for zinc are expected to be stable for the next 5 years.
- Biggest zinc deposits are in Aktobe, Ulytau, and East Kazakhstan regions.
- In 2022, top-3 destinations of Kazakhstan's exported zinc were Türkiye, Russia, and China that constitute almost 70% of Kazakhstan's zinc exports.
- China and Türkiye are in top-4 biggest global importers together with the United States and Germany. Kazakhstan is the biggest zinc provider to China with share in China's imports of 39%.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT

## ZINC; UNWROUGHT (HS 7901) (Existing Products)

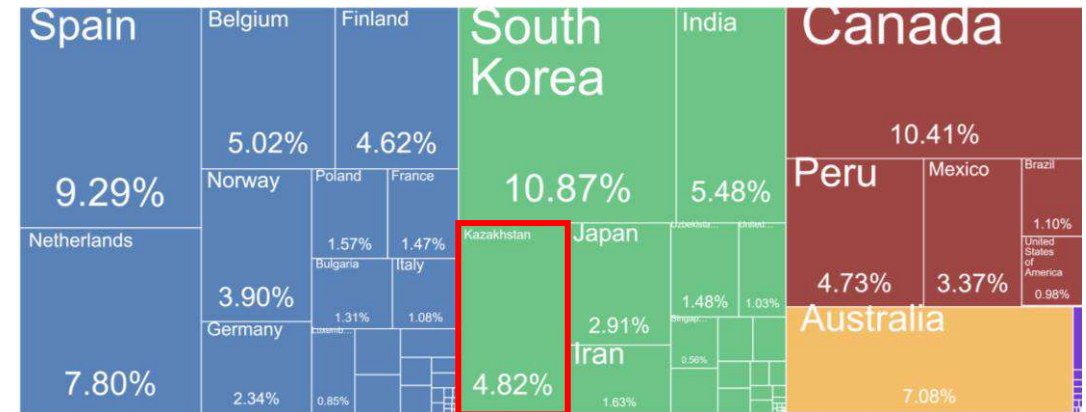
White dash line shows  
medium (zero) level



■ Feasibility factors    ■ Attractiveness factors

## SHARES OF EXPORTERS IN THE GLOBAL ZINC MARKET, 2021

Total global market in 2021 is \$15.5 billion



Kazakhstan's share in global exports – 4.82%

### HS codes:

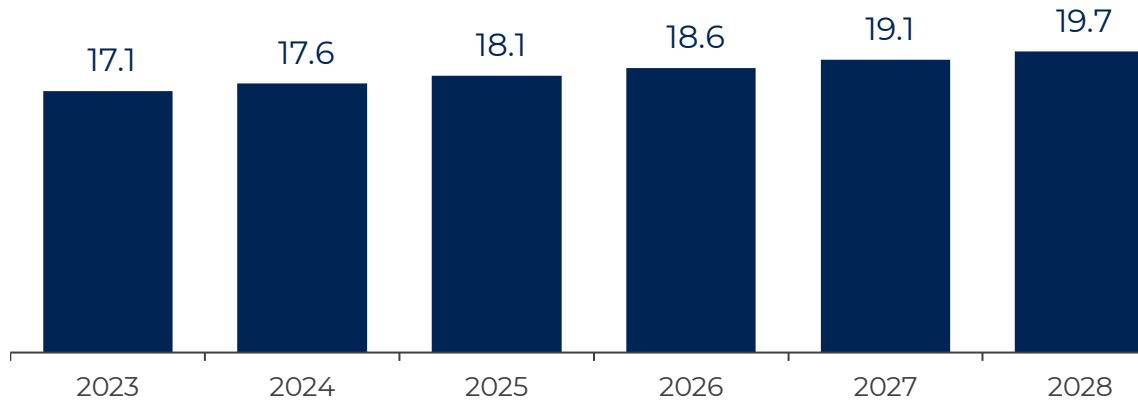
- 790111 Zinc; unwrought, (not alloyed), containing by weight 99.99% or more of zinc
- 790112 Zinc; unwrought, (not alloyed), containing by weight less than 99.99% of zinc
- 790120 Zinc; unwrought, alloys

Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*



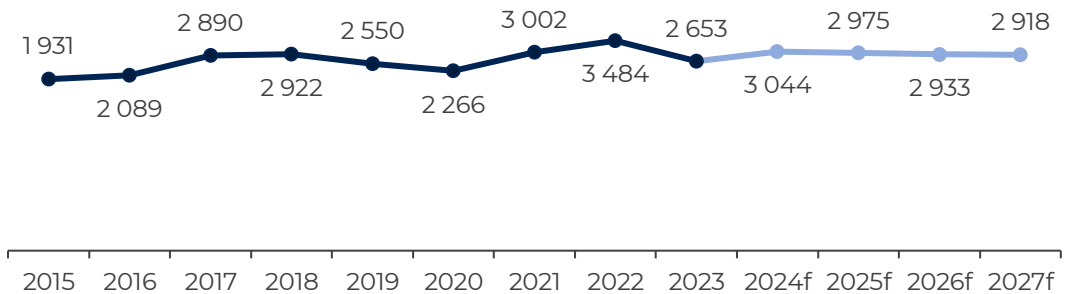
# ZINC – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**GLOBAL ZINC DEMAND FORECAST, 2023-2028**  
(million tonnes)



Source: *Statista*

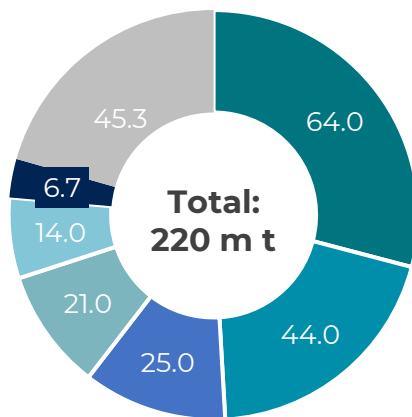
**HISTORIC AND FORECAST ZINC PRICE, 2015-2027**  
(nominal \$US/tonnes)



Source: *FRED, S&P Global*

**GLOBAL ZINC RESERVES IN 2023**

- Australia
- China
- Russia
- Peru
- Mexico
- Kazakhstan (#7)
- Others

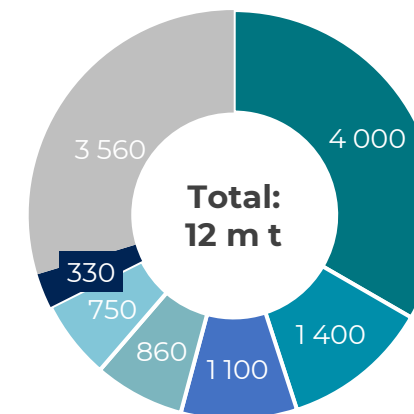


Source: *U.S. Geological Survey*

million tonnes

- **Australia** is the global leader in terms of zinc reserves, and **China** is the largest mining producer.
- In 2023, Kazakhstan had the **7<sup>th</sup> largest reserves** in the world with 6.7 million tonnes and the **8<sup>th</sup> largest mine production** with 330 thousand tonnes.
- According to a study of U.S. Geological Survey, global zinc **resources** contained 1.9 bn tonnes.

**GLOBAL ZINC MINE PRODUCTION IN 2023**

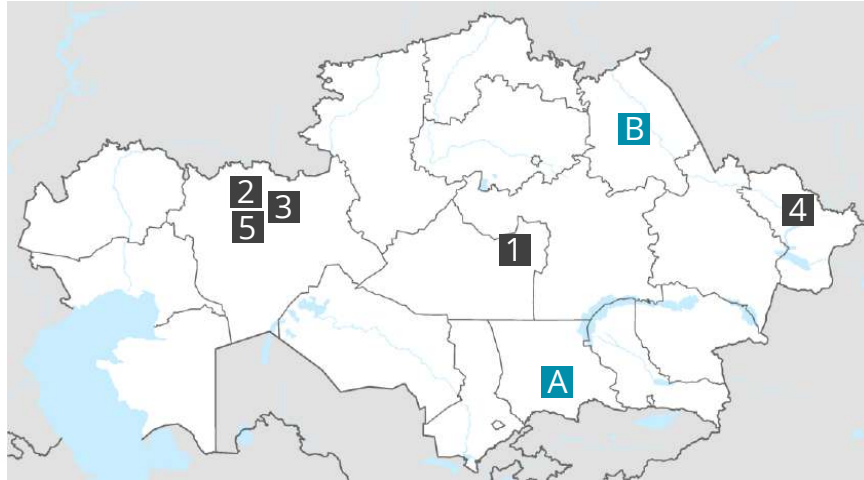


- China
- Peru
- Australia
- India
- US
- Kazakhstan (#8)
- Others

thousand tonnes

# ZINC – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S ZINC MINES AND PROJECTS



## KAZAKHSTAN'S 5 LARGEST ZINC MINES BY PRODUCTION:

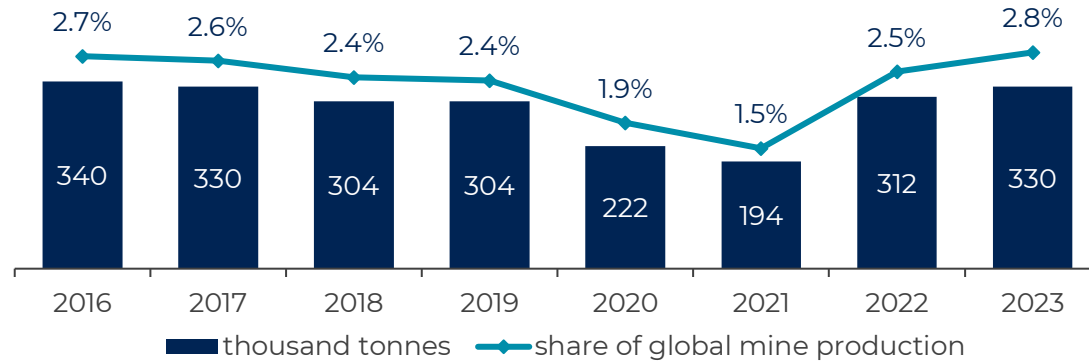
1. Zhairemsky Mine (71 thousand tonnes)
2. Priorskoye Mine (59 thousand tonnes)
3. 50 Let Oktyabrya Mine (39 thousand tonnes)
4. Maleevsky Mine (33 thousand tonnes)
5. Kundyzy Mine (24 thousand tonnes)

Source: [mining-technology.com](http://mining-technology.com)

#	Investment project	Investor's country	Timeline	Jobs to be created	Project cost \$million
A.	Processing of zinc-lead waste from metallurgical production	China	2020-2023	250	20
B.	Processing of lead-zinc batteries	Kazakhstan	2023-2023	70	1.2

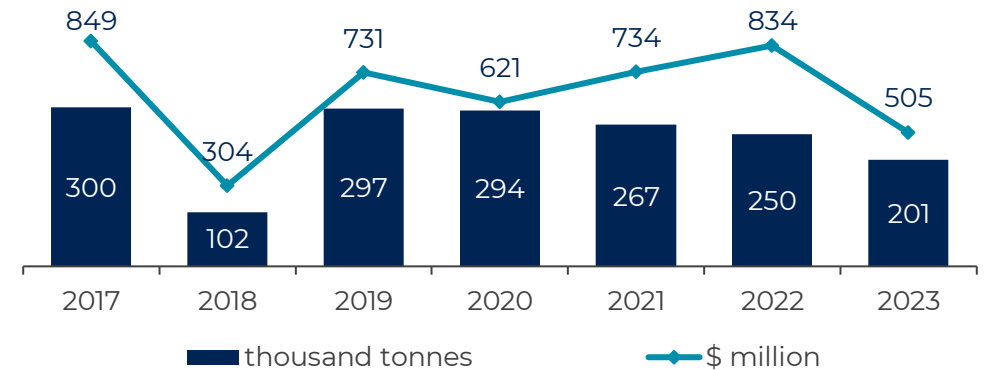
Source: [Kazakh Invest](http://Kazakh Invest)

## KAZAKHSTAN'S ZINC MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](http://U.S. Geological Survey, Mineral Commodity Summaries)

## KAZAKHSTAN'S EXPORTS



Source: [Kazakhstan's Bureau of National Statistics](http://Kazakhstan's Bureau of National Statistics)

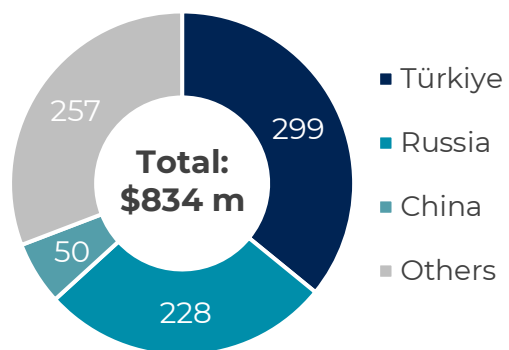
# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF UNWROUGHT ZINC IS 4.82%

KAZAKHSTAN'S TOP-3 ZINC IMPORTERS, 2022

China, Türkiye, and Russia constituted 70% of Kazakhstan's zinc exports.

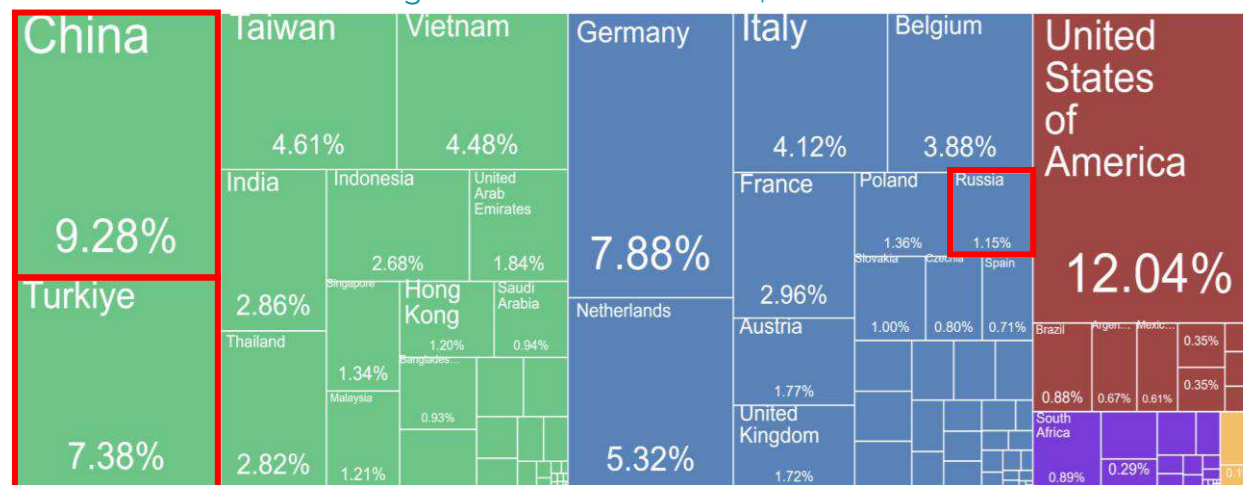
Kazakhstan accounts for a significant share in imports of zinc in those three countries.

China is the second largest global zinc importer.

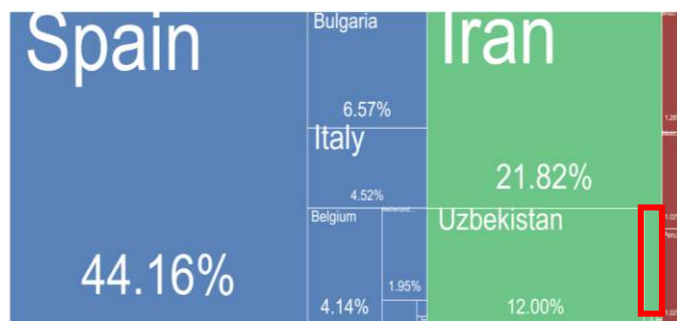


SHARES OF IMPORTERS IN THE GLOBAL ZINC MARKET, 2021

Total global market in 2021 is \$15.5 billion



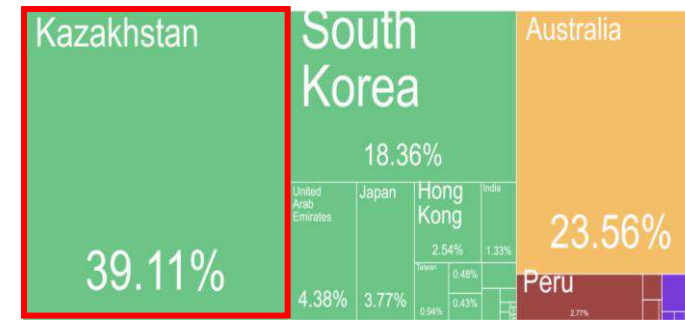
TÜRKIYE'S ZINC IMPORTS IN 2022 WERE \$1 333 M



RUSSIA'S ZINC IMPORTS IN 2022 WERE \$177 M



CHINA'S ZINC IMPORTS IN 2022 WERE \$502 M



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

# 3. ALUMINIUM



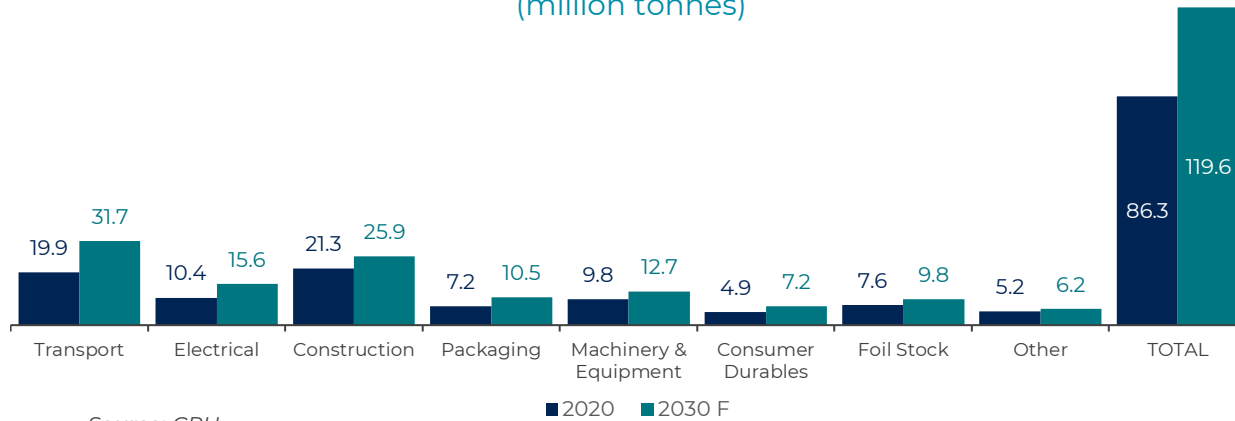
# ALUMINIUM (HS 7601)

- Aluminium has a moderately low product complexity index, but a large total addressable market. Aluminium is averagely resilient to oil shocks and averagely sensitive to physical distance of export destination.
- Kazakhstan's share in the global market of aluminium is less than 1%. Aluminium is extracted from bauxites. Major bauxite mines of Kazakhstan are in Kostanay region, while the biggest aluminium facility is in Pavlodar because of access to cheap electricity that is necessary for the metal extraction.
- In 2023, Kazakhstan had the 11th largest reserves of bauxites in the world with 160 million tonnes and the 10th largest mine production with 4.3 million tonnes.
- Global prices for aluminium are expected to be stable for the next 5 years.
- In 2022, top-3 destinations of Kazakhstan's exported aluminium were Türkiye, Italy, and Greece that constitute 34% of Kazakhstan's aluminium exports.
- Türkiye, Italy, and Greece have significant share in global imports, but largest importers are the United States, China, Germany, and Japan.



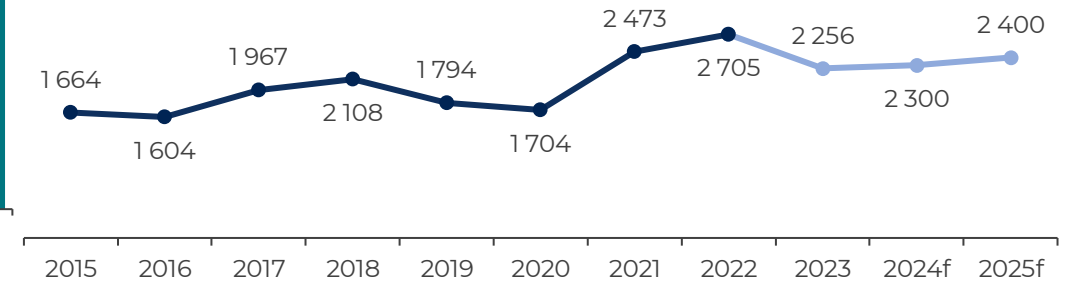
# ALUMINIUM – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**BREAKDOWN OF ALUMINUM SEMI-FINISHED PRODUCTS CONSUMPTION, 2020 VS 2030**  
(million tonnes)



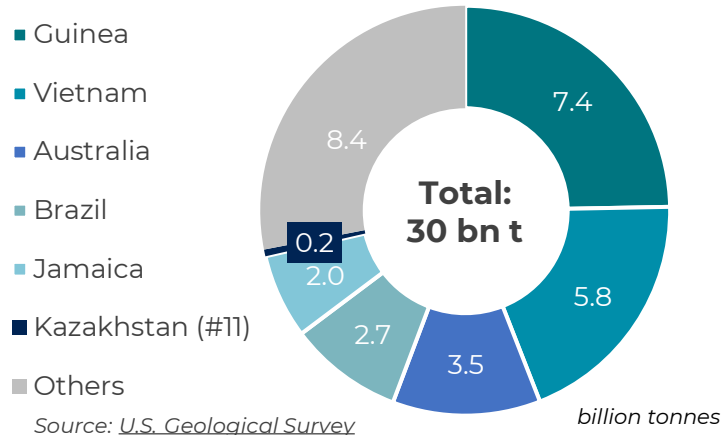
Source: CRU

**HISTORIC AND FORECAST ALUMINUM PRICE, 2015-2025**  
(nominal \$US/tonnes)



Source: ERED, World Bank

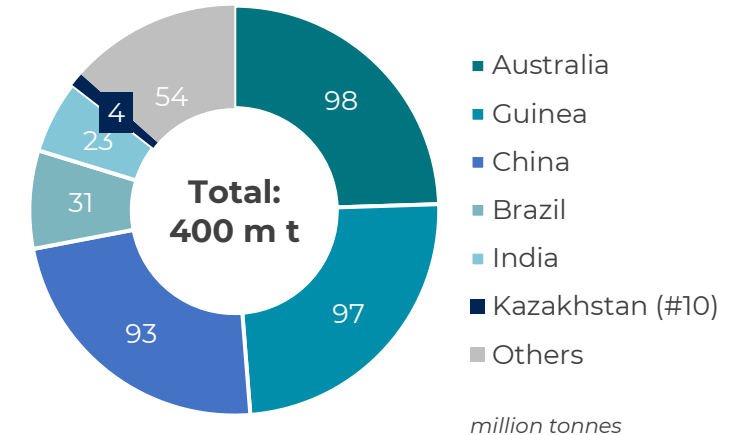
**GLOBAL BAUXITE RESERVES IN 2023**



Source: U.S. Geological Survey

- Guinea is the global leader in terms of bauxite reserves and Australia is the largest mining producer.
- In 2023, Kazakhstan had the **11<sup>th</sup> largest reserves** in the world with 160 million tonnes and the **10<sup>th</sup> largest mine production** with 4.3 million tonnes.
- According to a study of U.S. Geological Survey, total global **resources** are estimated to be between 55 and 75 bn tonnes.

**GLOBAL BAUXITE MINE PRODUCTION IN 2023**



million tonnes

# ALUMINIUM – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S BAUXITE MINES AND ALUMINIUM PROJECTS



## KAZAKHSTAN'S MAJOR OPERATING BAUXITE MINES:

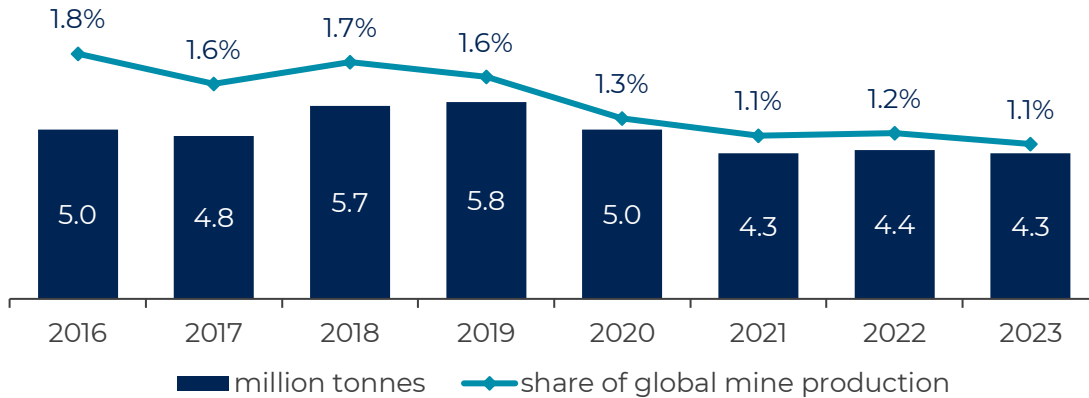
1. Krasno Oktyabrskoye
2. Turgai Bauxite
3. Ayatskoye

Source: [mining-technology.com](http://mining-technology.com)

#	Investment project	Timeline	Jobs to be created	Project cost \$million
A.	Production of aluminium products in West-Kazakhstan region	2023-2025	10	1.4
B.	Production of aluminium radiators in Karagandy region	2021-2025	220	35
C.	Production of aluminium sheet and aluminium foil in Pavlodar region	2023-2025	100	16
D.	Construction of a plant to produce aluminium heating radiators in Shymkent city	2023-2026	300	22
E.	Production of aluminium and bimetallic radiators in Pavlodar region	2022-2024	100	6

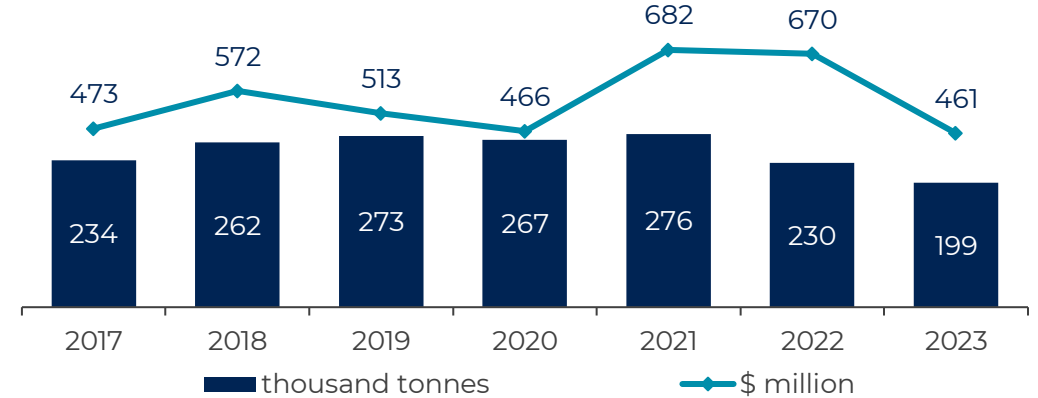
Source: [Kazakh Invest](http://Kazakh Invest)

## KAZAKHSTAN'S BAUXITE MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](http://U.S. Geological Survey, Mineral Commodity Summaries)

## KAZAKHSTAN'S EXPORTS



Source: [Kazakhstan's Bureau of National Statistics](http://Kazakhstan's Bureau of National Statistics)

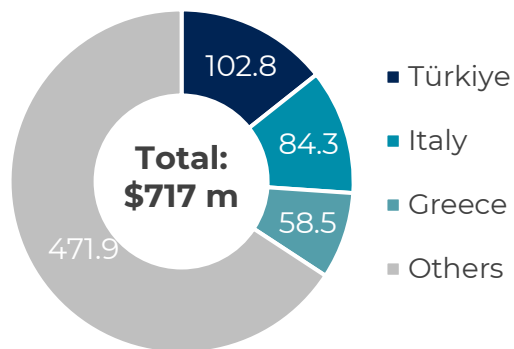


# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF ALUMINIUM IS 0.67%

**KAZAKHSTAN'S TOP-3 ALUMINIUM IMPORTERS, 2022**

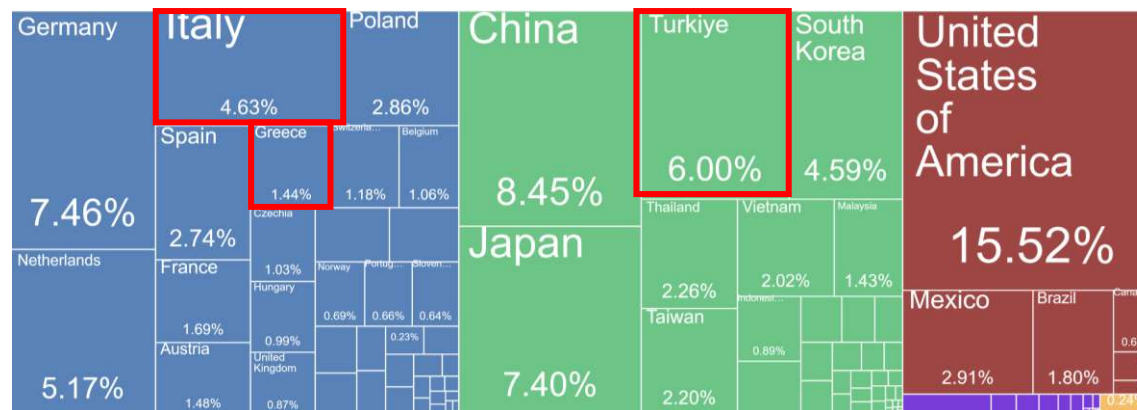
Türkiye, Italy and Greece constitute 34% of Kazakhstan's aluminium exports.

Türkiye is among the top aluminium importing countries globally.

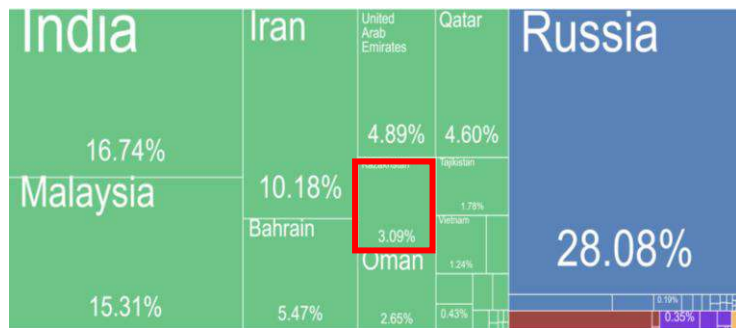


**SHARES OF IMPORTERS IN THE GLOBAL ALUMINIUM MARKET, 2021**

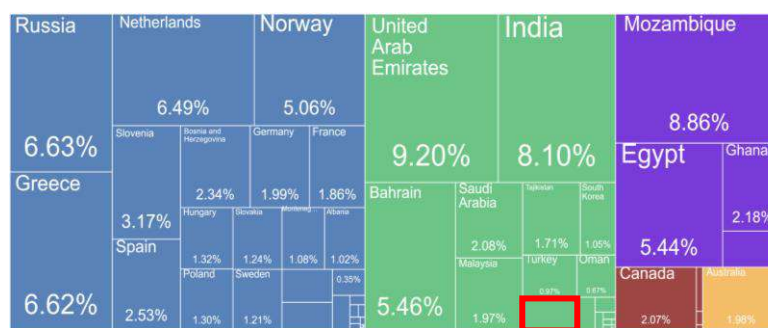
Total global market in 2021 is \$73.6 billion



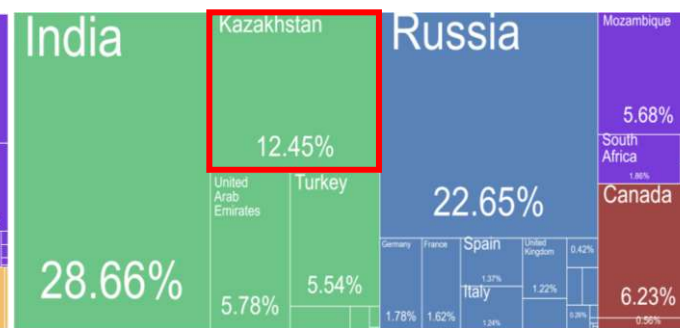
**TÜRKIYE'S ALUMINIUM IMPORTS IN 2022 WERE \$5.23 BN**



**ITALY'S ALUMINIUM IMPORTS IN 2022 WERE \$4.81 BN**



**GREECE'S ALUMINIUM IMPORTS IN 2022 WERE \$1.37 BN**



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

# 4. SILVER



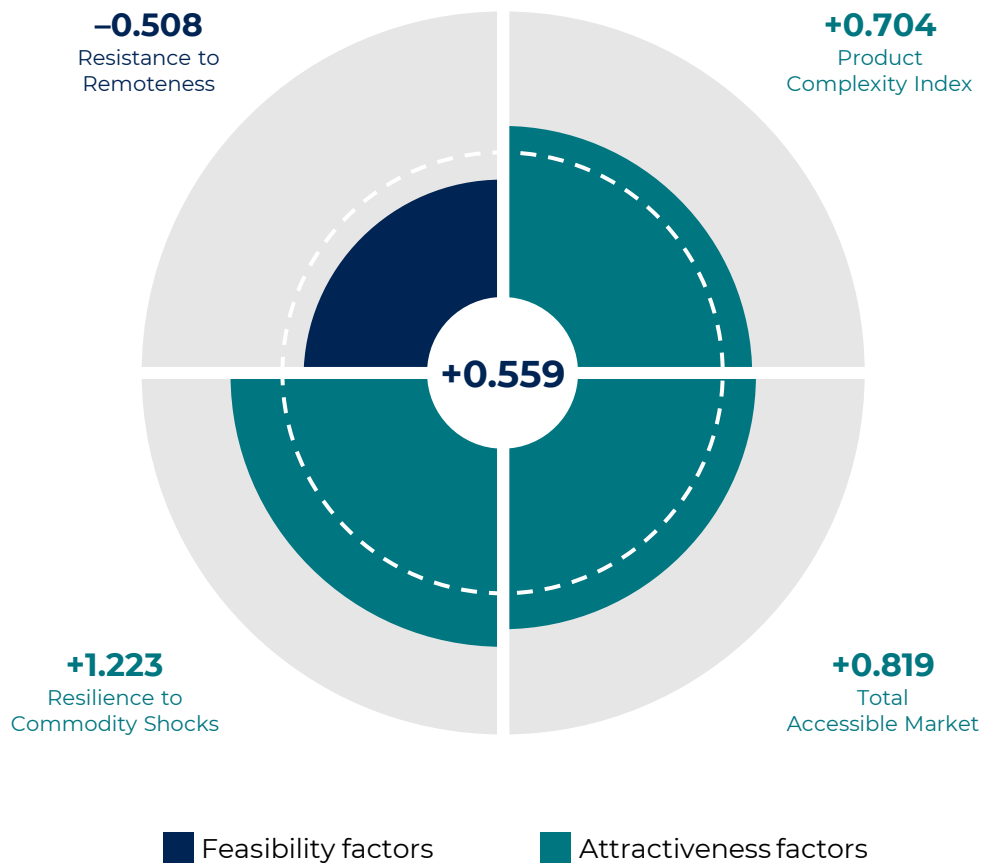
# SILVER (HS 7106)

- Silver has a moderately high product complexity index and a large total addressable market. Silver is highly resilient to oil shocks and moderately sensitive to physical distance of export destination.
- Kazakhstan's share in the global market of silver is about 2.7%. In 2023, Kazakhstan had the 10th largest mine production with 990 tonnes, according to the USGS. According to Kazakh Invest, Kazakhstan has the 3rd largest silver reserves in the world.
- The current annual demand for silver is about 26 thousand tonnes, 4 thousand tonnes of which are used in green energy sector. Under the Net Zero Emissions Scenario, green demand for silver might increase from current 4 thousand tonnes to 9 thousand tonnes by 2030. Global prices for silver are expected to increase by almost 20% for the next 3 years.
- In 2022, the United Kingdom was the biggest destination of Kazakhstan's exported silver. The United Kingdom constitutes more than 85% of Kazakhstan's silver exports. The United Kingdom together with the United States, Canada, and Hong Kong are the top-4 global silver importers.
- Because silver is accounted as a precious metal, the official trade statistics include also non-physical trade between global financial centres.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT

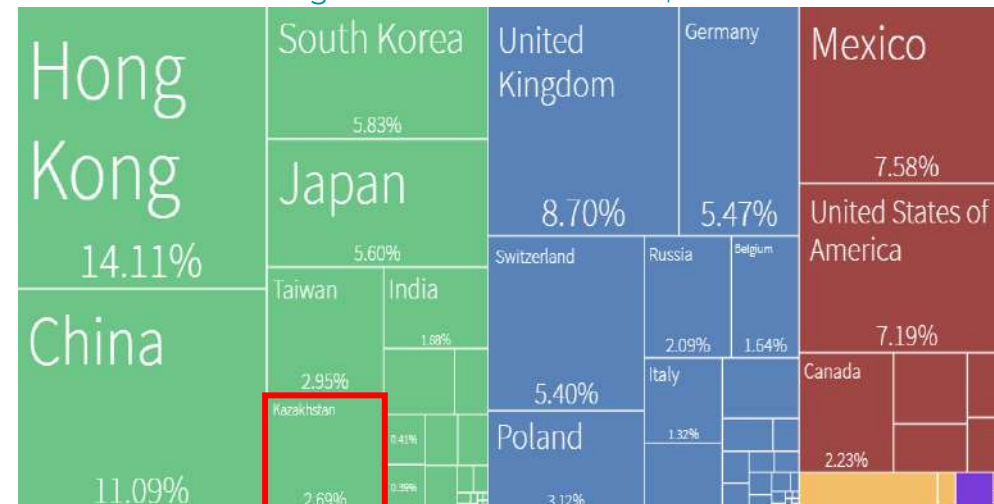
## SILVER; UNWROUGHT OR IN SEMI-MANUF./POWDER FORM (7106) (Existing Products)

White dash line shows  
medium (zero) level



Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

## SHARES OF EXPORTERS IN THE GLOBAL SILVER MARKET, 2021 Total global market in 2021 is \$36.7 billion



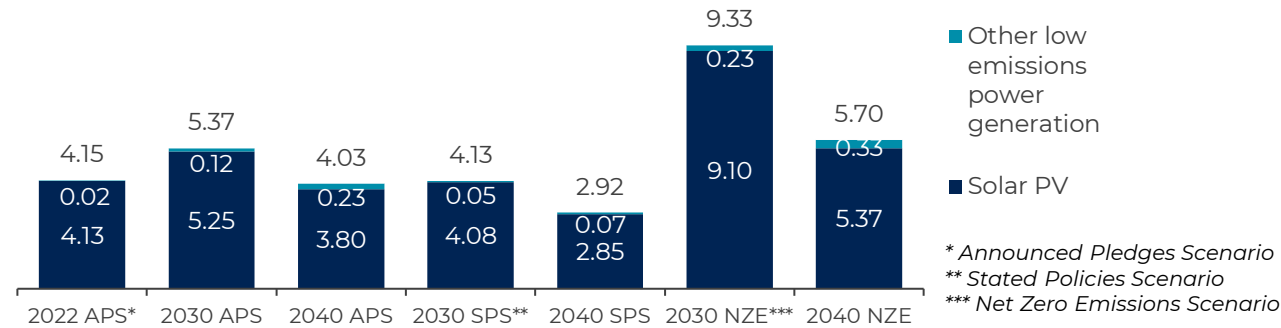
Kazakhstan's share in global exports – 2.69%

### HS codes:

- 710610 Silver powder
- 710691 Silver, unwrought, (but not powder)
- 710692 Silver, semi-manufactured

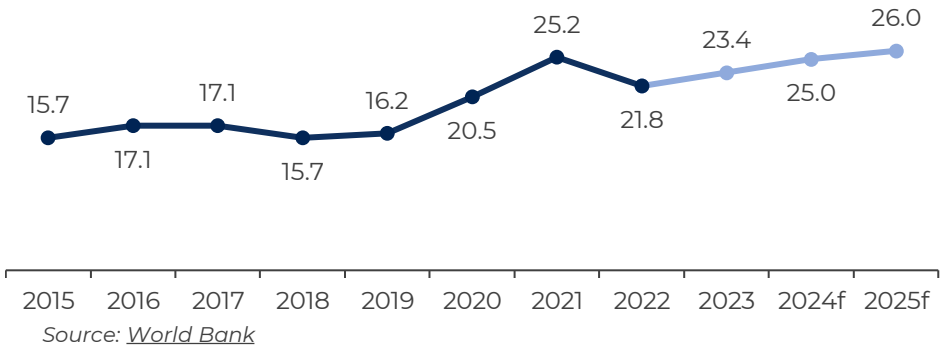
# SILVER – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**SILVER GREEN DEMAND BY SUBSECTOR AND SCENARIO, 2022-2040**  
(thousand tonnes)



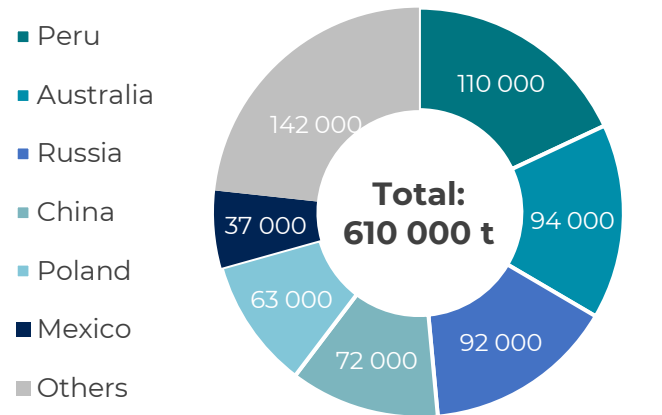
Source: [International Energy Agency](#)

**HISTORIC AND FORECAST SILVER PRICE, 2015-2025**  
(nominal \$US/troy ounce)



Source: [World Bank](#)

**GLOBAL SILVER RESERVES IN 2023**

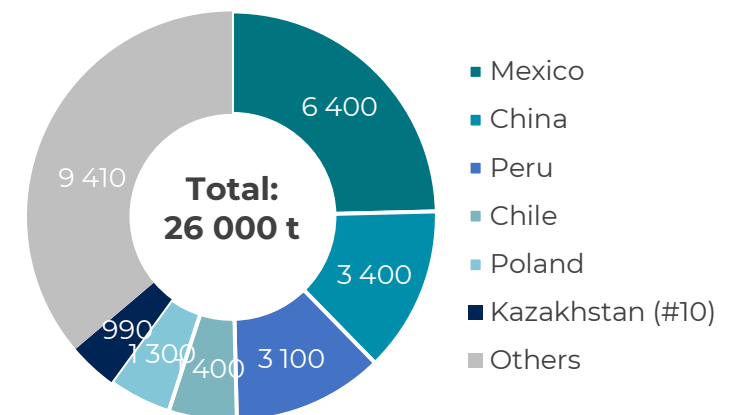


Source: [U.S. Geological Survey](#)

tonnes

- Peru is the global leader in terms of silver reserves, and Mexico is the largest mining producer.
- In 2023, Kazakhstan had the **10th largest** mine production with 990 tonnes.
- USGS does not provide Kazakhstan's silver reserves. According to Kazakh Invest, Kazakhstan has the **3rd largest silver reserves** in the world.

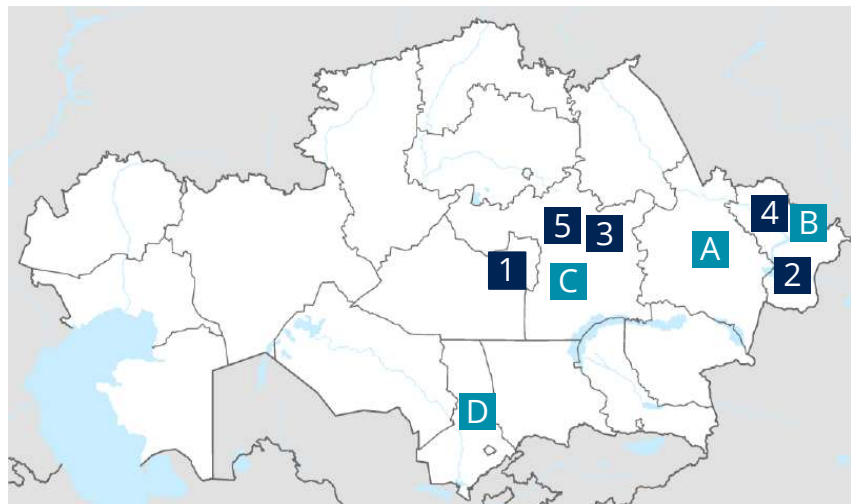
**GLOBAL SILVER MINE PRODUCTION IN 2023**



tonnes

# SILVER – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S SILVER MINES AND PROJECTS



## KAZAKHSTAN'S 5 LARGEST SILVER MINES BY PRODUCTION (2023):

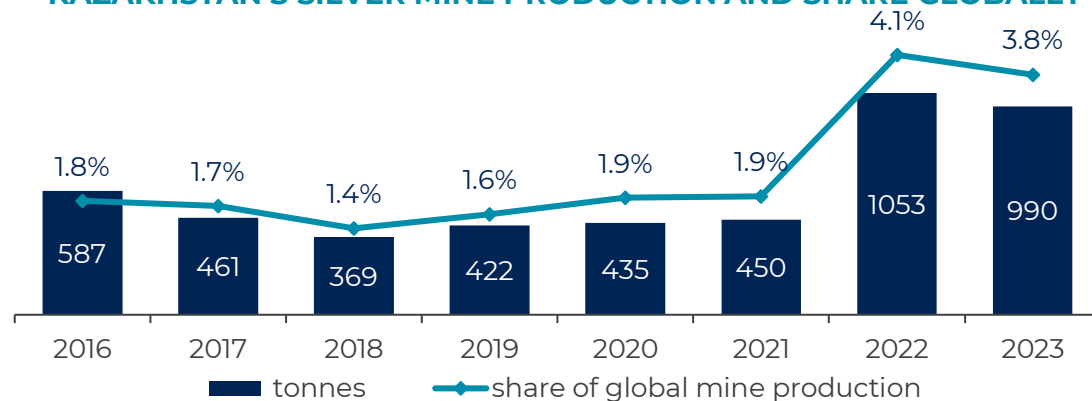
1. Zhezkazgan Mine (8.4 million ounces)
2. Aktogay Project (1.2 million ounces)
3. Zhairemsky Mine (1.1 million ounces)
4. Maleevsky Mine (0.9 million ounces)
5. Artemyevsky Mine (0.9 million ounces)

Source: [mining-technology.com](https://www.mining-technology.com)

#	Investment project	Timeline	Jobs to be created	Project cost \$million
A.	Construction of a metallurgical plant for the production of gold and silver alloys in Abai region	2019–2025	443	15
B.	Industrial development of deposits of non-ferrous and precious metals in the East Kazakhstan region	2024+	n/a	0.03
C.	Development of the Alaigyr lead-silver deposit	2024+	n/a	0.35
D.	Mining and processing of gold-silver ores at the Kumysty deposit	2024+	n/a	0.1

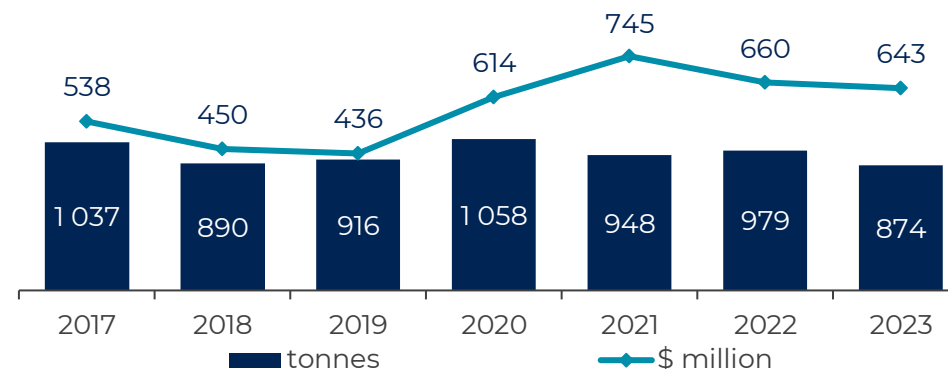
Source: [Kazakh Invest](https://kazakhinvest.kz)

## KAZAKHSTAN'S SILVER MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](https://www.usgs.gov)

## KAZAKHSTAN'S EXPORTS



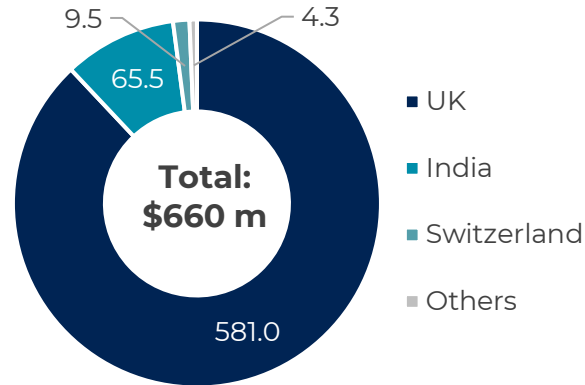
Source: [Kazakhstan's Bureau of National Statistics](https://stat.gov.kz)

# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF SILVER IS 2.69%

**KAZAKHSTAN'S TOP-3 SILVER IMPORTERS, 2022**

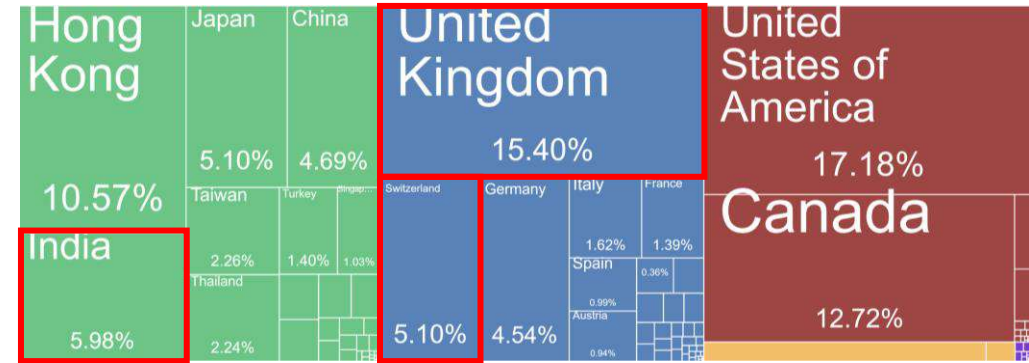
United Kingdom, India, and Switzerland constituted 99% of Kazakhstan's silver exports.

United Kingdom is the second largest silver importer globally.



**SHARES OF IMPORTERS IN THE GLOBAL SILVER MARKET, 2021**

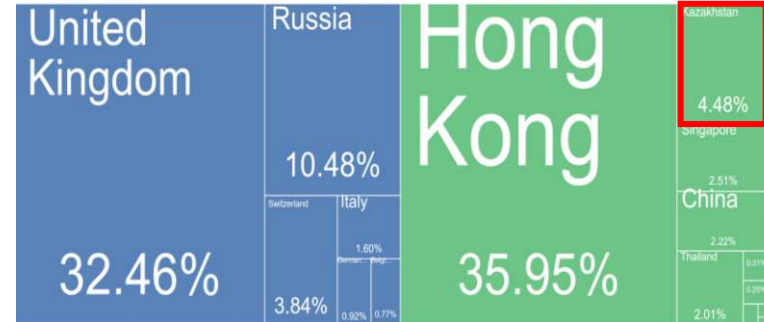
Total global market in 2021 is \$36.7 billion



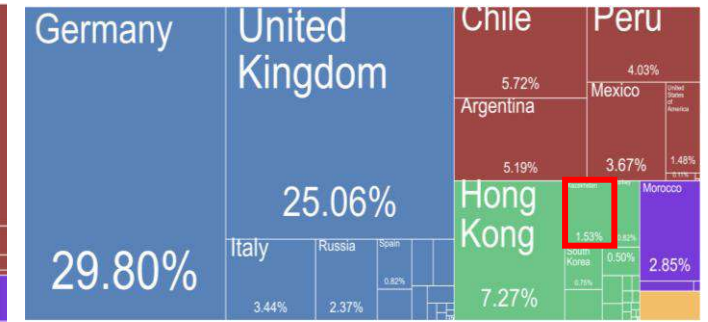
**UK'S SILVER IMPORTS IN 2022 WERE \$2.2 BN**



**INDIA'S SILVER IMPORTS IN 2022 WERE \$6.4 BN**



**SWITZERLAND'S SILVER IMPORTS IN 2022 WERE \$1.36 BN**



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

# 5. LEAD





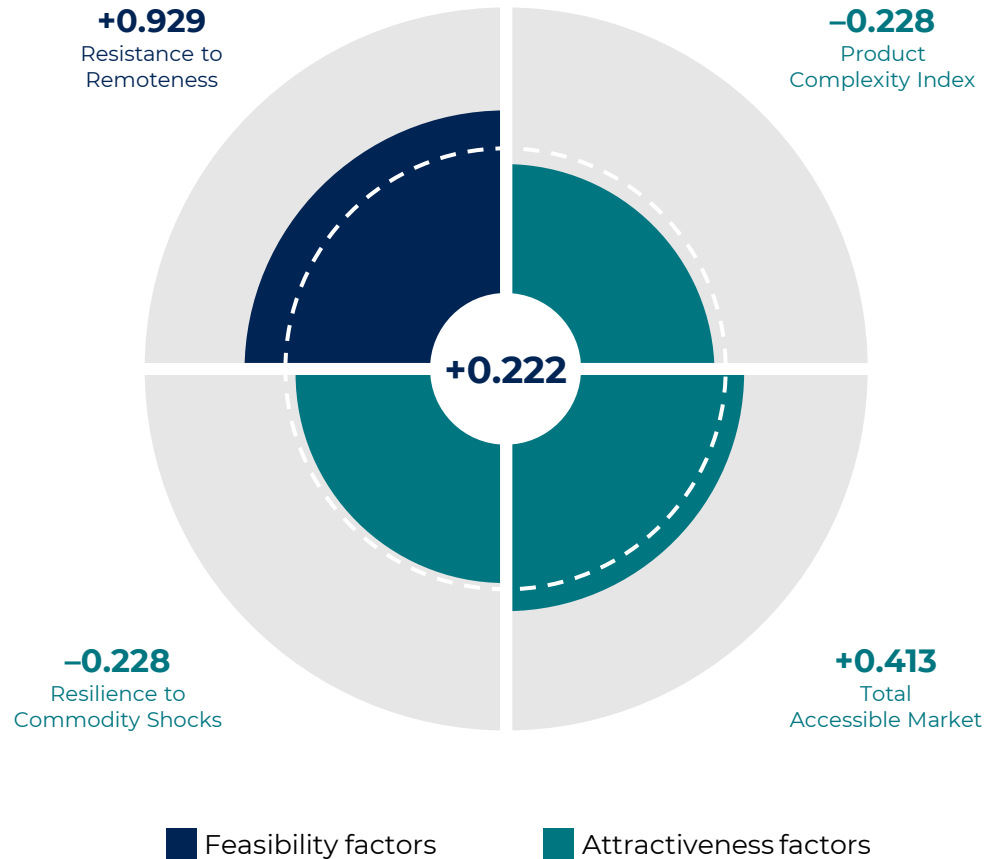
# LEAD (HS 7801)

- Lead has an average product complexity index and a large total addressable market. Lead is averagely resilient to oil shocks, and indifferent to physical distance of export destination.
- Kazakhstan's share in the global market of lead is almost 3%.
- In 2021, Kazakhstan had the 8th largest reserves in the world with 2 million tonnes and the 12th largest mine production with 40 000 tonnes.
- Global annual demand for lead is expected to increase from current 11.6 million tonnes in 2022 to 13.4 million tonnes by 2031. Global prices for lead are expected to slightly decline for the next 3 years.
- Largest lead mines of Kazakhstan are in East and Central Kazakhstan.
- In 2022, top-3 destinations of Kazakhstan's exported lead were Vietnam, Türkiye, and the Netherlands that constitute about 67% of Kazakhstan's lead exports. Kazakhstan's share in lead imports of Vietnam, Türkiye, and the Netherlands are 4%, 5%, and 15%, respectively.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT

## LEAD; UNWROUGHT (7801) (Existing Products)

White dash line shows  
medium (zero) level



## SHARES OF EXPORTERS IN THE GLOBAL LEAD MARKET, 2021 Total global market in 2021 is \$7.6 billion



Kazakhstan's share in global exports – 2.93%

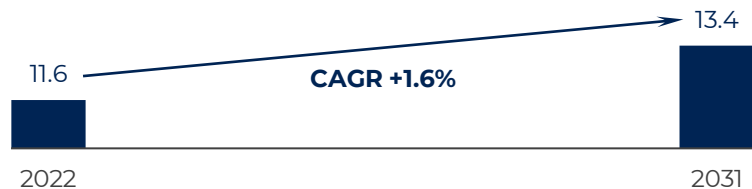
### HS codes:

- 780110 Lead; unwrought, refined
- 780191 Lead; unwrought, unrefined, containing by weight antimony as the principal other element
- 780199 Lead; unwrought, unrefined, not containing by weight antimony as the principal other element

Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

# LEAD – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

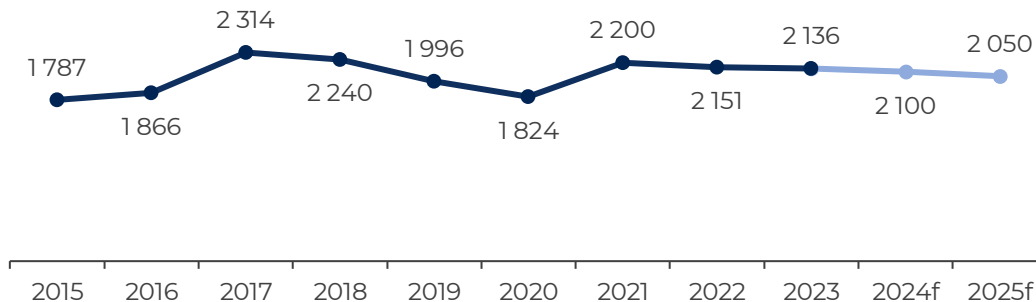
**GLOBAL LEAD DEMAND FORECAST, 2022-2031**  
(thousand tonnes)



Refined lead consumption is supplied from mining and recycling. Fitch Solutions forecasts global refined lead consumption to grow from 11.6 million tonnes in 2022 to 13.4 million tonnes by 2031, 1.6% an average annual growth over 2022-2031.

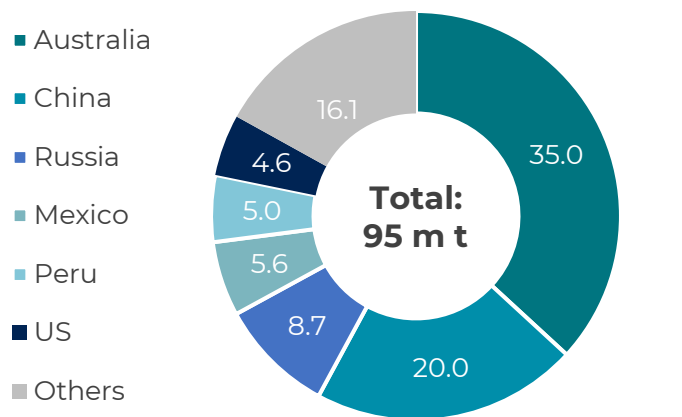
Source: [Fitch Solutions](#)

**HISTORIC AND FORECAST LEAD PRICE, 2015-2025**  
(nominal \$US/tonnes)



Source: [FRED](#), [World Bank](#)

**GLOBAL LEAD RESERVES IN 2023**

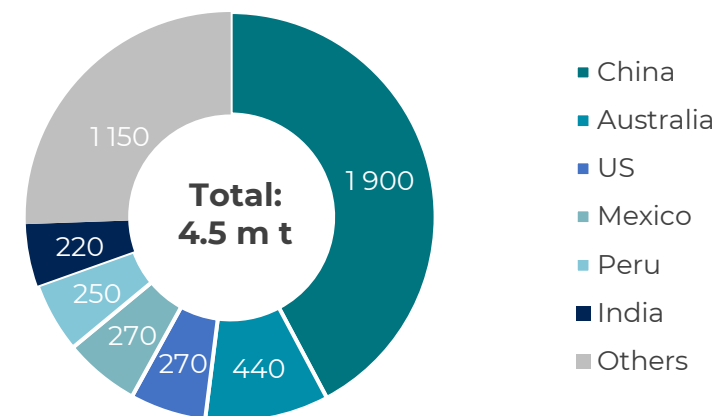


Source: [U.S. Geological Survey](#)

million tonnes

- **Australia** is the global leader in terms of lead reserves, and **China** is the largest mining producer.
- In 2021, Kazakhstan had **the 8th largest reserves** in the world with 2 million tonnes and the **12th largest mine** production with 40 000 tonnes.
- According to a study of U.S. Geological Survey, identified world lead **resources** stood at more than 2 bn tonnes.

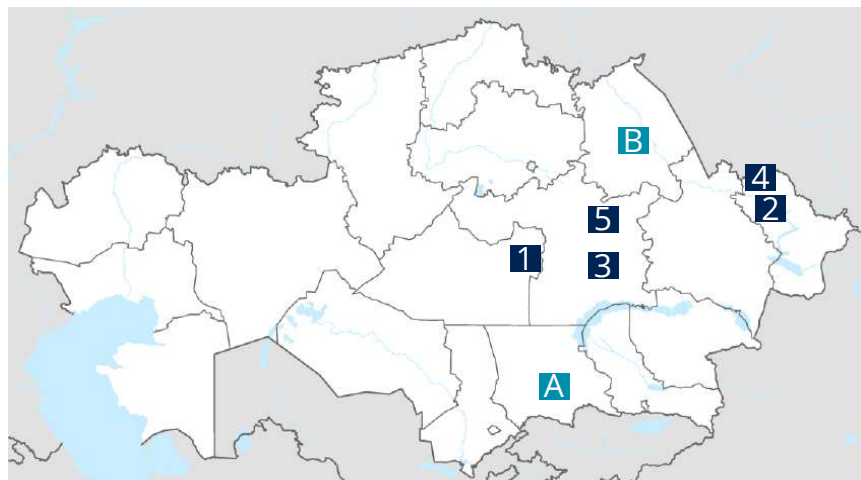
**GLOBAL LEAD MINE PRODUCTION IN 2023**



thousand tonnes

# LEAD – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S LEAD MINES AND PROJECTS



## KAZAKHSTAN'S 5 LARGEST LEAD MINES BY PRODUCTION:

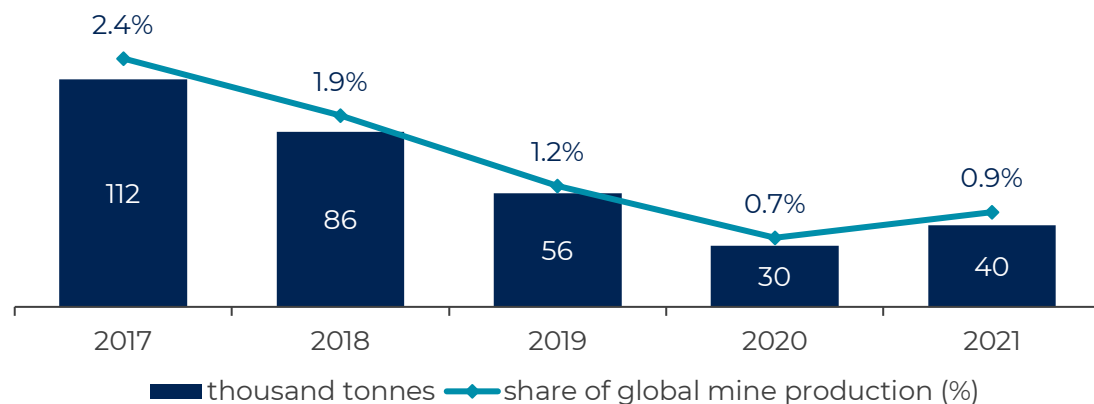
1. Zhairemsky Mine (22 thousand tonnes)
2. Maleevsky Mine (6 thousand tonnes)
3. Akzhal Zinc Lead Mine (5 thousand tonnes)
4. Tishinsky Mine (1.8 thousand tonnes)
5. Artemyevsky Mine (0.9 thousand tonnes)

Source: [mining-technology.com](http://mining-technology.com)

#	Investment project	Investor's country	Timeline	Jobs to be created	Project cost \$million
A.	Processing of zinc-lead waste from metallurgical production	China	2020-2023	250	20
B.	Processing of lead-zinc batteries	Kazakhstan	2023-2023	70	1.2

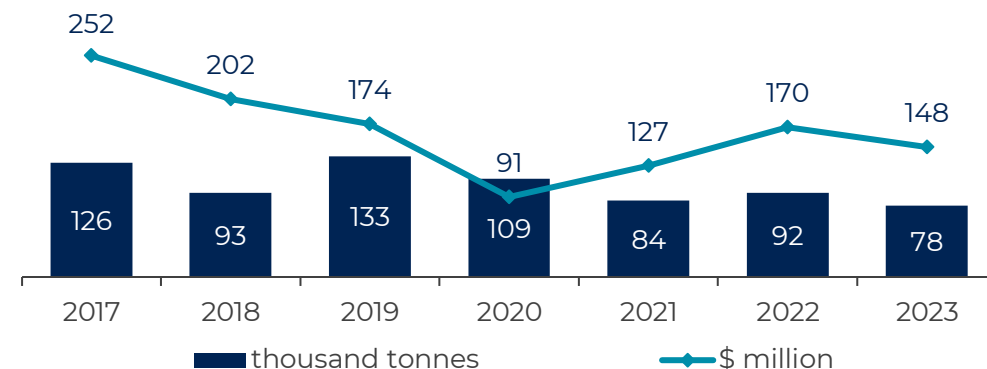
Source: [Kazakh Invest](http://Kazakh Invest)

## KAZAKHSTAN'S LEAD MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](http://U.S. Geological Survey, Mineral Commodity Summaries)

## KAZAKHSTAN'S EXPORTS



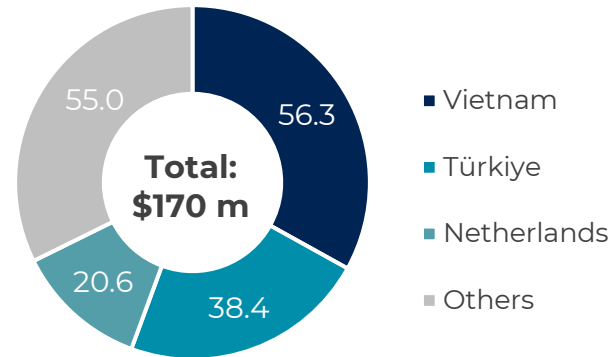
Source: [Kazakhstan's Bureau of National Statistics](http://Kazakhstan's Bureau of National Statistics)

# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF LEAD IS 2.93%

**KAZAKHSTAN'S TOP-3 LEAD IMPORTERS, 2022**

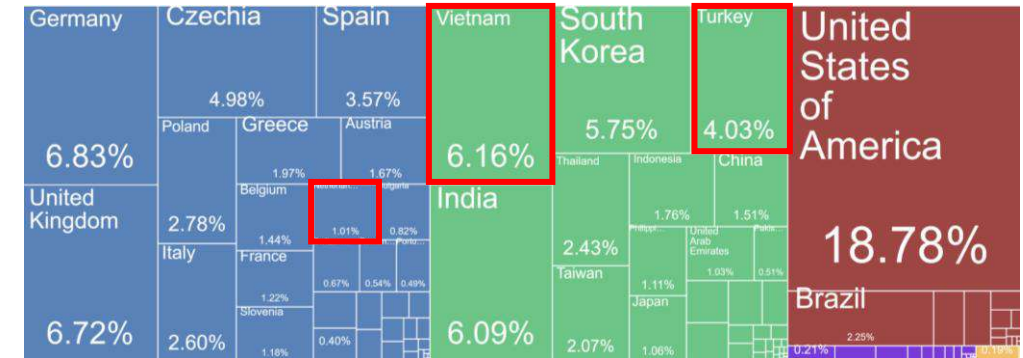
Vietnam, Türkiye, and the Netherlands constituted 67% of Kazakhstan's lead exports.

Global largest lead importers are United States, Germany, United Kingdom, Vietnam, and India.



**SHARES OF IMPORTERS IN THE GLOBAL LEAD MARKET, 2021**

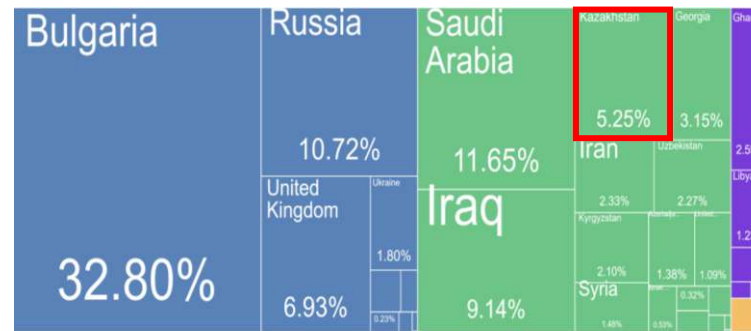
Total global market in 2021 is \$7.6 billion



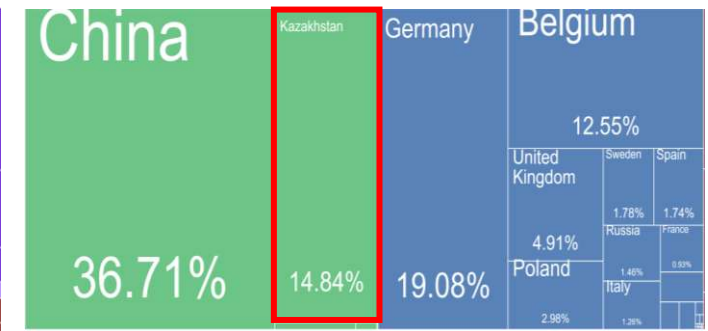
**VIETNAM'S LEAD IMPORTS IN 2021 WERE \$528 M**



**TÜRKIYE'S LEAD IMPORTS IN 2022 WERE \$449 M**



**NETHERLANDS' LEAD IMPORTS IN 2022 WERE \$76 M**



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

# NEW AND NASCENT PRODUCTS



# 6. NICKEL

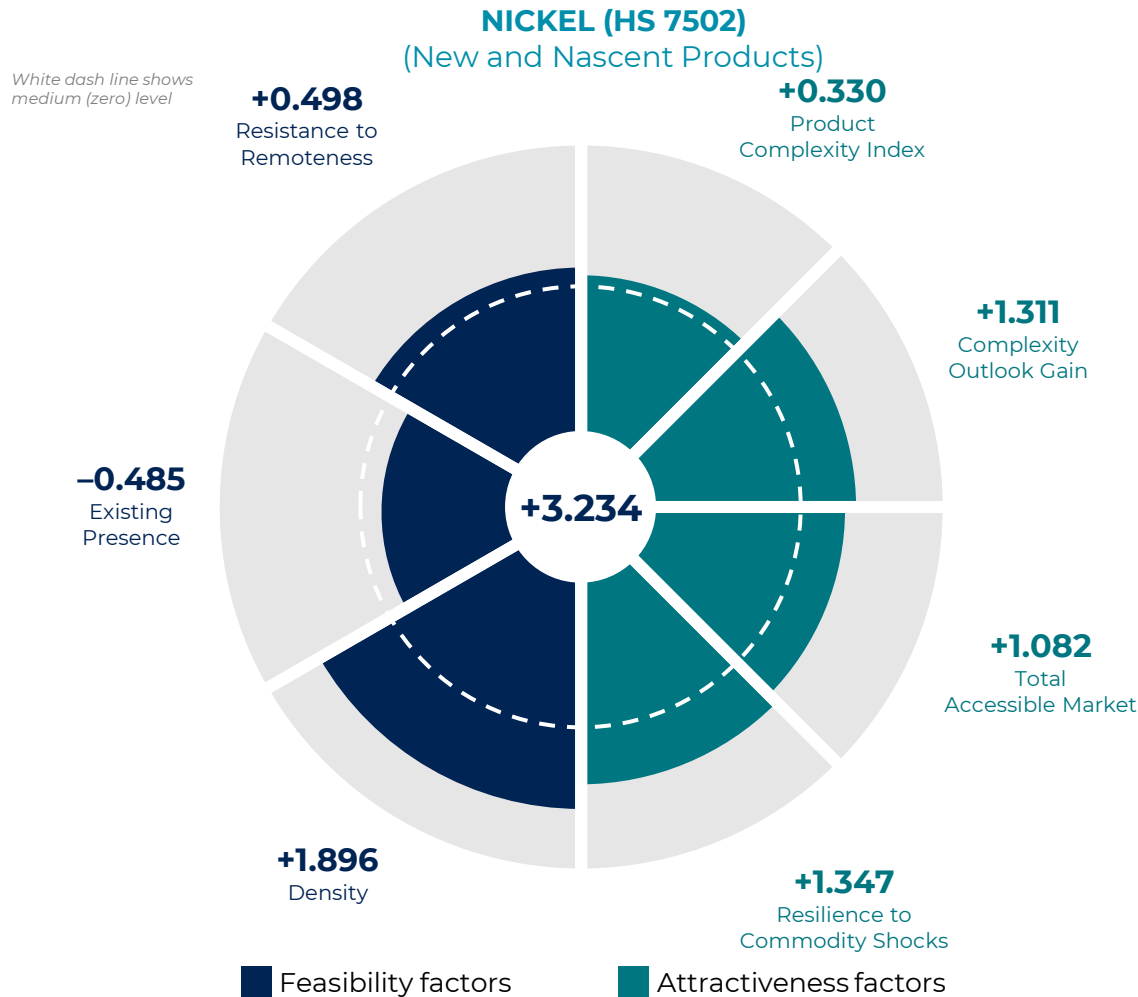


# NICKEL (HS 7502)

- Nickel has an average product complexity index, but a large total addressable market. Nickel is highly resilient to oil shocks and opens wide opportunities for diversification in higher complexity in future. There are some existing presence that might be a basis for export expansion, and high density shows comparative easiness to diversify into nickel production for Kazakhstan. Nickel is moderately indifferent to physical distance of export destination.
- Global international market of nickel is \$16 billion. Kazakhstan's share in the global nickel market is negligible and close to 0%, despite the fact that, according to Kazakh Invest, Kazakhstan is in the top 20 countries in terms of nickel reserves with about 1.5 million tonnes or 2% of the global total.
- Global annual demand for nickel is expected to increase from current 3 million tonnes to 3.9-5.8 million tonnes by 2030 and to 4.8-6.5 million tonnes by 2050. Global prices for nickel are expected to gradually increase for the next 5 years by 6-7% annually.
- In 2023, Germany was the biggest destination of Kazakhstan's exported nickel that accounts for more than 95% of Kazakhstan's nickel exports. Germany is one of the 5 largest global nickel importers. China is the biggest importer of nickel with a global share of almost 40%.

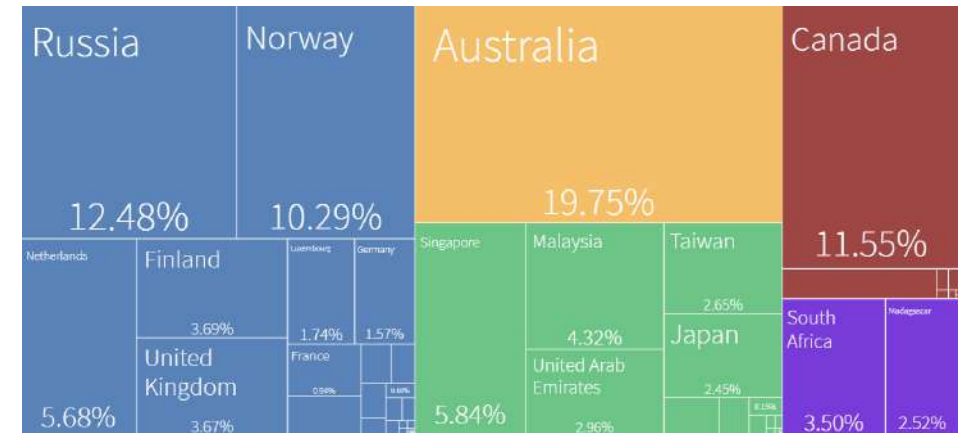


# RESULTS OF THE ECONOMIC COMPLEXITY REPORT



## SHARES OF EXPORTERS IN THE GLOBAL NICKEL MARKET, 2021

Total global market in 2021 is \$16 billion



Kazakhstan's share in global exports is less than 0.01%

### HS codes:

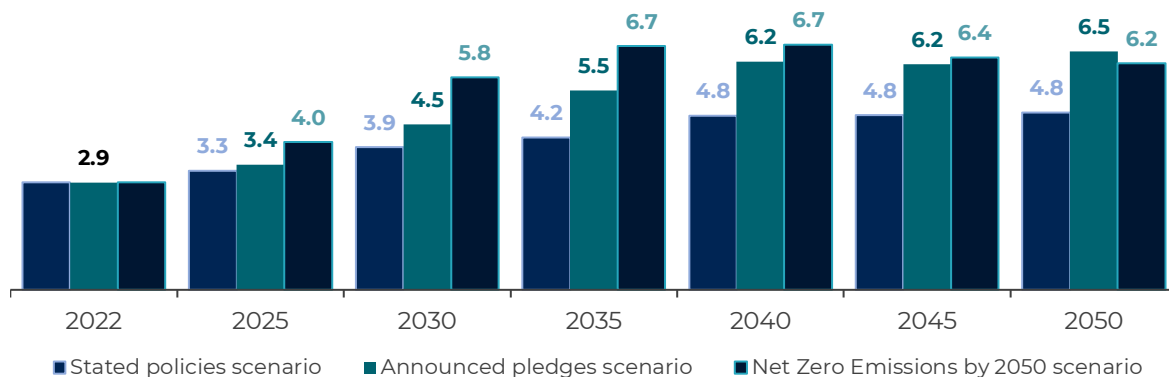
- 750210 Nickel unwrought, not alloy
- 750220 Nickel unwrought, alloy

Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

# NICKEL – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

GLOBAL NICKEL DEMAND BY SCENARIO, 2022-2050

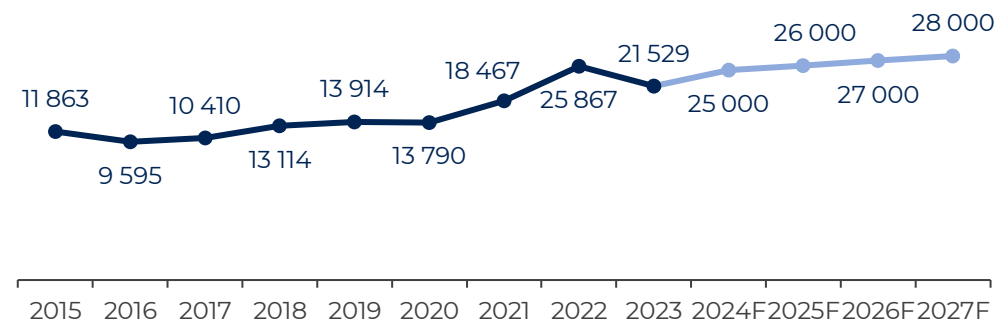
(million tonnes)



Source: [International Energy Agency](#)

HISTORIC AND FORECAST NICKEL PRICE, 2015-2027

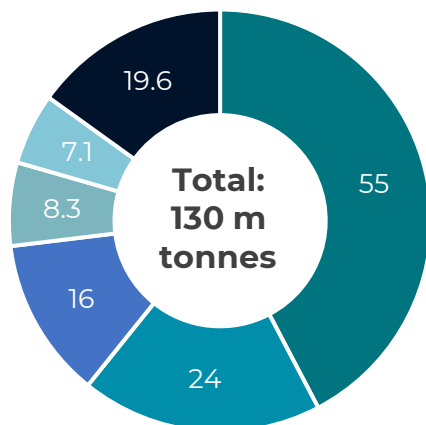
(nominal \$US/tonnes)



Source: [FRED](#), [S&P Global](#)

GLOBAL NICKEL RESERVES IN 2023

- Indonesia
- Australia
- Brazil
- Russia
- New Caledonia (France)
- Others



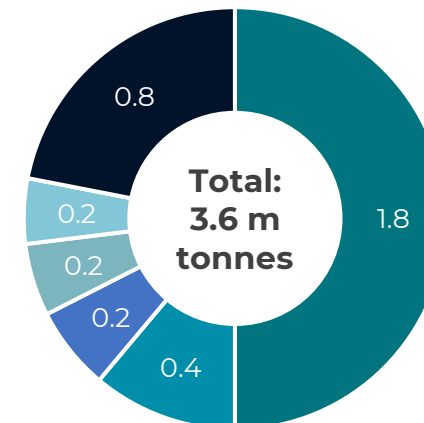
Source: [US Geological Survey](#)

million tonnes

- Indonesia** is the global leader in terms of nickel reserves and mining production.
- Kazakhstan** is in the top 20 countries in terms of nickel reserves with about 1.5 million tonnes or 2% of the global total.

Source: [Kazakh Invest](#), [dprom.kz](#)

GLOBAL NICKEL MINE PRODUCTION IN 2023

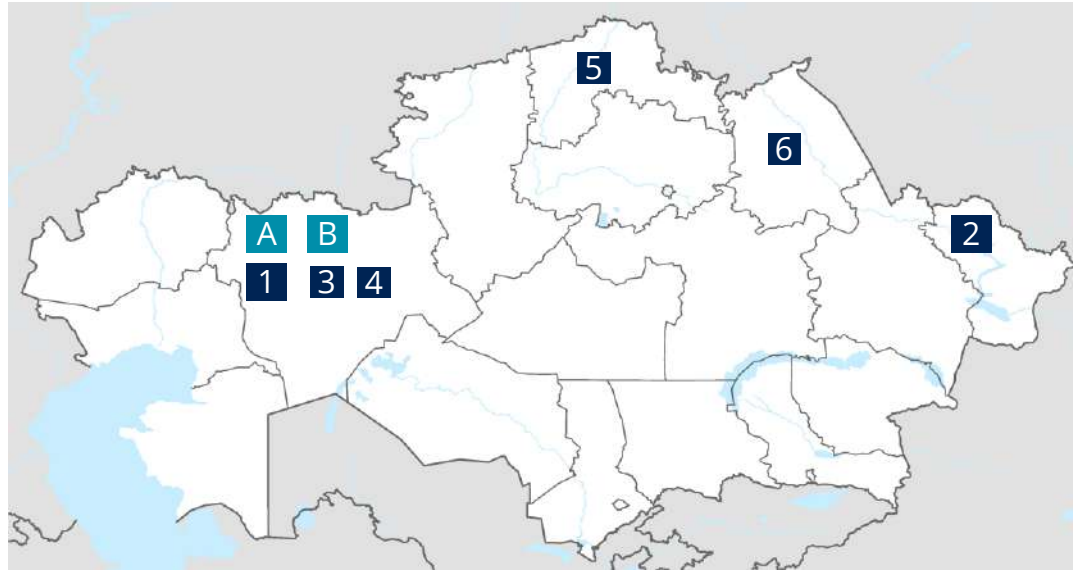


Source: [US Geological Survey](#)

million tonnes

# NICKEL – KAZAKHSTAN PRODUCTION

KAZAKHSTAN'S NICKEL MINES AND PROJECTS MAP



SELECT NICKEL DEPOSITS IN KAZAKHSTAN:

1. Bugetkol - 251 000 tonnes
2. Belogorskoye - 48 000 tonnes
3. Dzhusalinskoye – 44 200 tonnes
4. Kempirsai – 29 700 tonnes
5. Shevchenskoe
6. Ekibastuz-Shidertinskoe

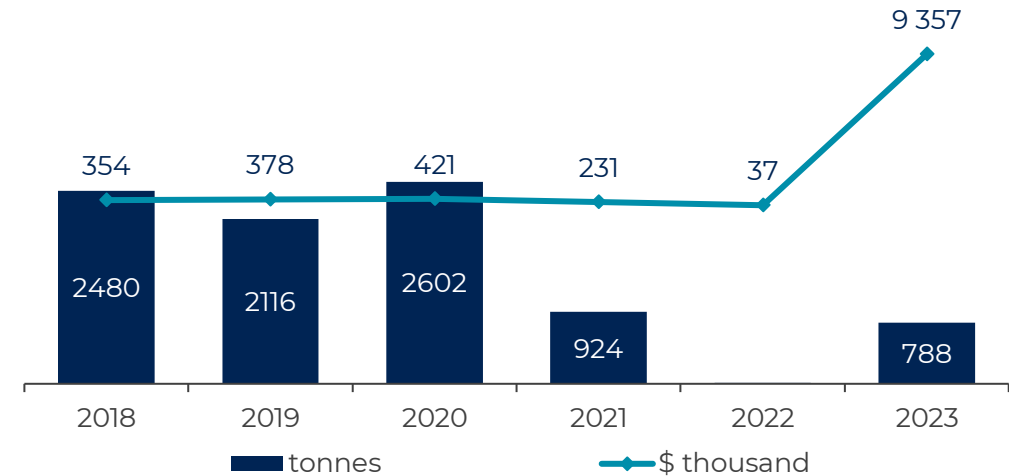
Source: *KazakhInvest, Damu Research*

INVESTMENT PROJECTS

#	Investment project	Investor's country	Region	Project cost, \$million
A.	Construction of a plant for processing nickel-cobalt ores	Kazakhstan	Aktobe	900
B.	Mining of nickel-cobalt ores and construction of a battery plant	Kazakhstan	Aktobe	500

Source: *Kazakh Invest*

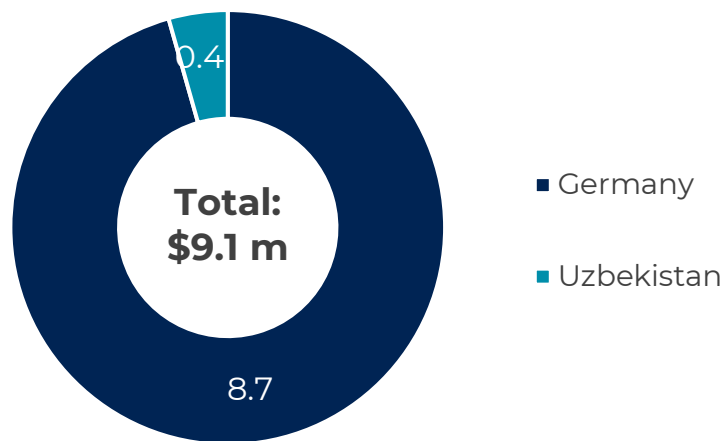
KAZAKHSTAN'S EXPORTS (HS codes 2604 & 7502)



Source: *Kazakhstan's Bureau of National Statistics*

# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF NICKEL MINES

KAZAKHSTAN'S TOP NICKEL IMPORTERS, 2023

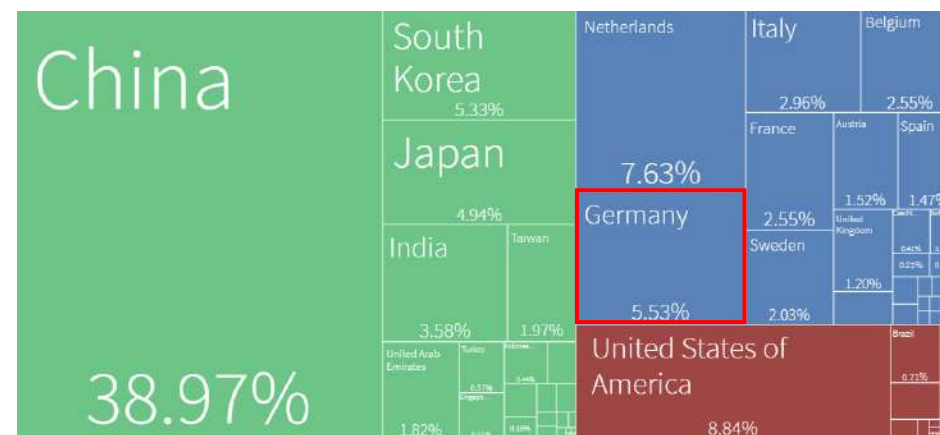


In 2023, Kazakhstan exported nickel unwrought (HS 7502) and nickel ores and concentrates (HS 2604) to Germany and Uzbekistan that constitute 100% of Kazakhstan's nickel importers.

China and Germany account for 44.5% of global imports (HS 7502).

SHARES OF IMPORTERS IN THE GLOBAL NICKEL MARKET, 2021

Total global market in 2021 is \$16 billion



Uzbekistan 0.01%

GERMANY'S NICKEL IMPORTS IN 2022 WERE \$1 585 M



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

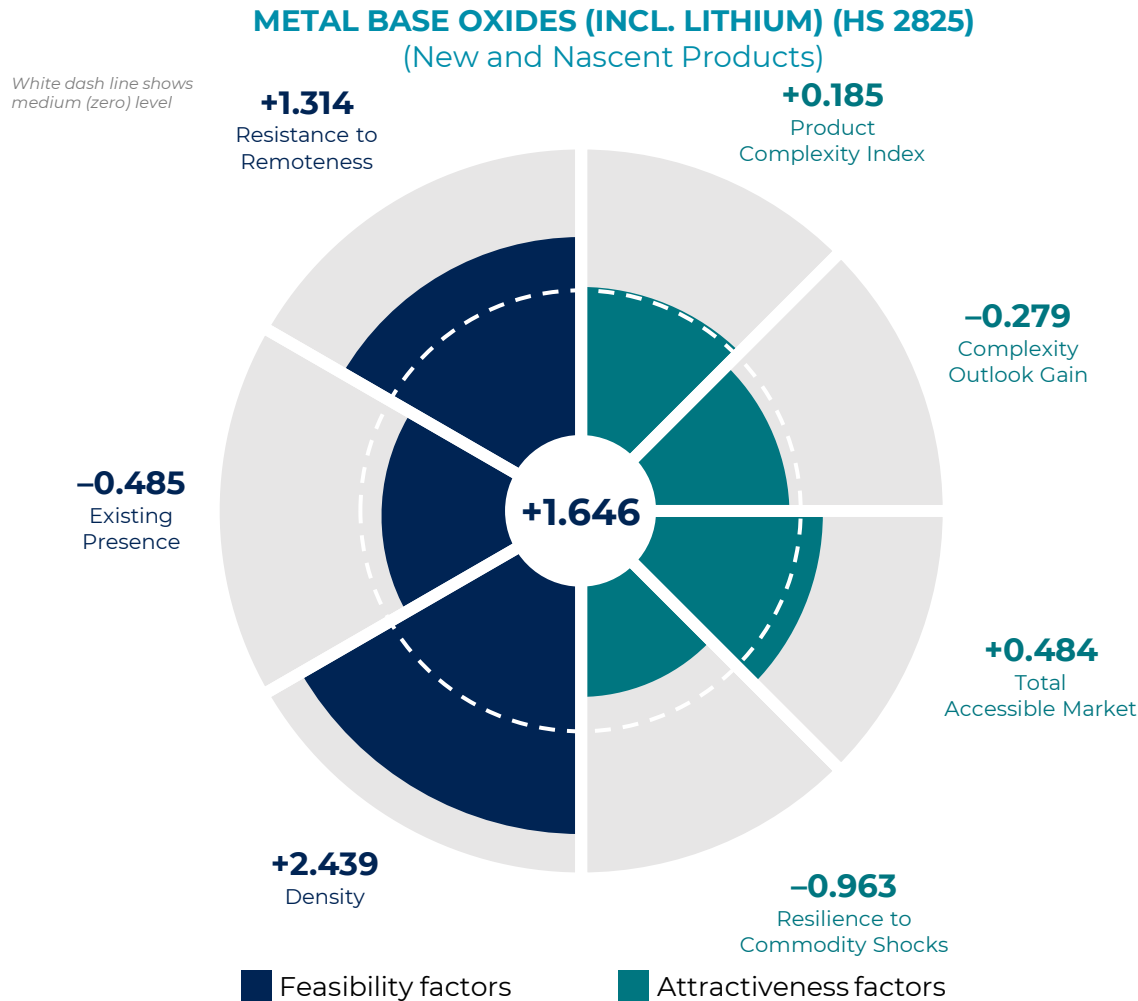
# 7. LITHIUM



# LITHIUM (HS 2825)

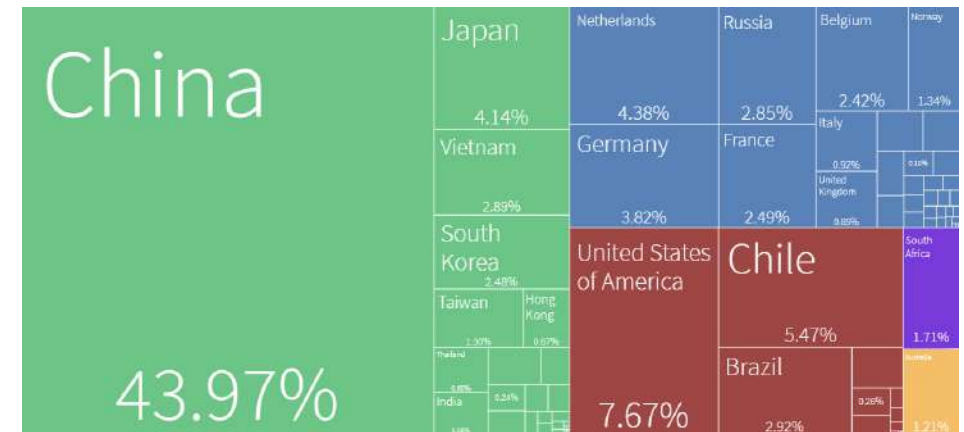
- Lithium has an average product complexity index, but a large total addressable market. Lithium is poorly resilient to oil shocks and opens average opportunities for diversification in higher complexity in future. There are some existing presence that might be a basis for export expansion, and high density shows comparative easiness to diversify into lithium production for Kazakhstan. Lithium is indifferent to physical distance of export destination.
- Global trade market of lithium amounted to \$7 billion in 2021.
- Depending on the green scenario, global annual demand for lithium is expected to increase from 130 thousand tonnes in 2022 to 312-721 thousand tonnes by 2030 and to 603-1313 thousand tonnes by 2050.
- While Chile is the global leader in terms of lithium reserves and Australia is the leader in lithium mine production, Kazakhstan has not conducted any large-scale search for potential lithium reserves yet. The country might hold about 50-100 thousand tonnes of lithium reserves. Kazakhstan's geology service have been partnering with companies from Germany, South Korea, and the UK to explore and develop lithium fields in East Kazakhstan.
- In March 2024, Korean Institute of Geoscience and Mineral Resources discovered a new lithium deposit with a grade of 5.3% in East Kazakhstan. It may be worth \$15.7 billion. In April 2024, Rio Tinto initiated exploration for lithium in East Kazakhstan.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT



## SHARES OF EXPORTERS IN THE GLOBAL LITHIUM MARKET, 2021

Total global market in 2021 is \$7 billion



Kazakhstan's share in global exports – 0.01%

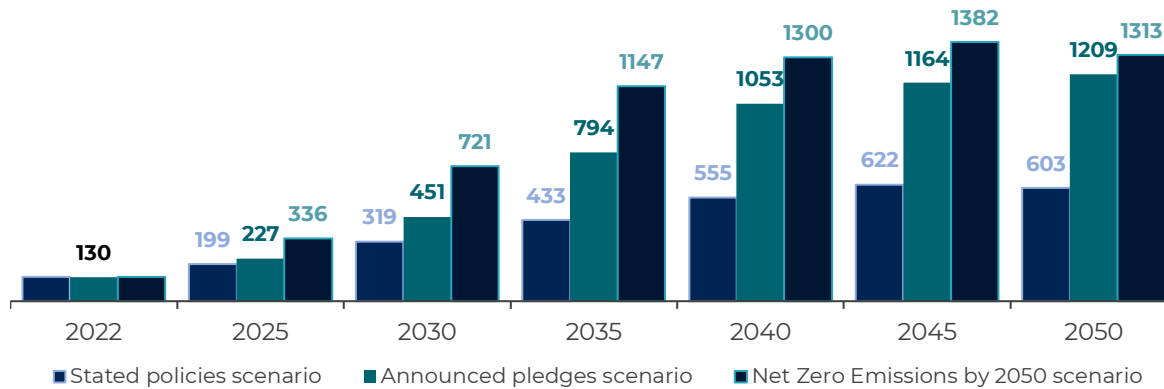
### HS codes:

- 282510 Inorganic salts
- 282520 Lithium oxides
- 282530 Vanadium oxides
- 282540 Nickel oxides
- 282550 Copper oxides
- 282560 Germanium oxides
- 282570 Molybdenum oxides
- 282580 Antimony oxides
- 282590 Metal based oxides

Sources: *Industry Targeting Dashboard, Atlas of Economic Complexity*

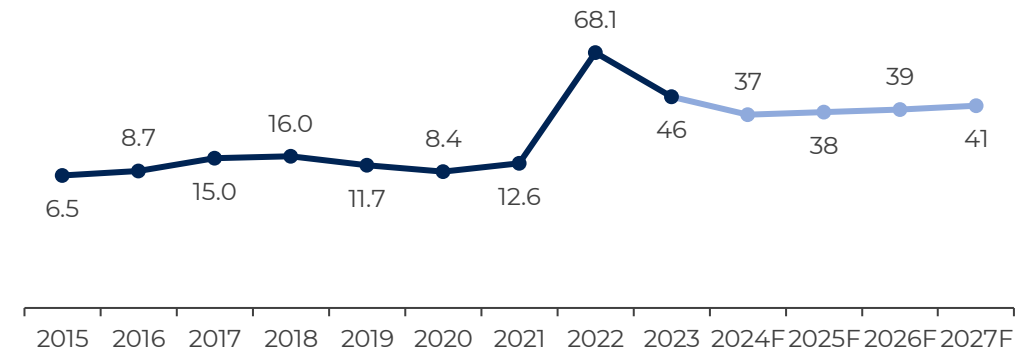
# LITHIUM – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**GLOBAL LITHIUM DEMAND BY SCENARIO, 2022-2050**  
(thousand tonnes)



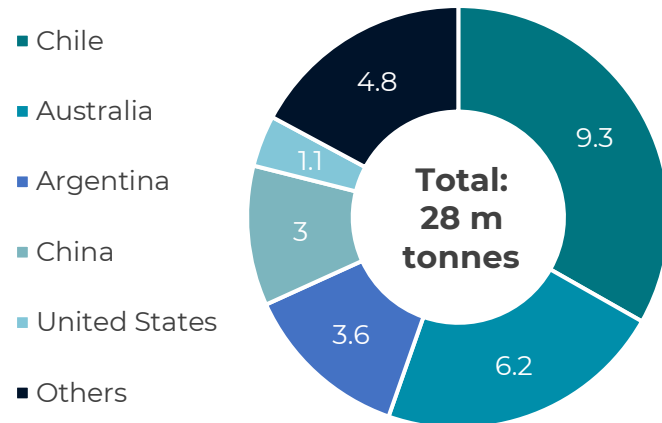
Source: [International Energy Agency](#)

**HISTORIC AND FORECAST LITHIUM PRICE, 2015-2027,**  
(nominal \$US thousand/tonnes)



Source: [statista.com](#), [S&P Global](#)

**GLOBAL LITHIUM RESERVES IN 2023**

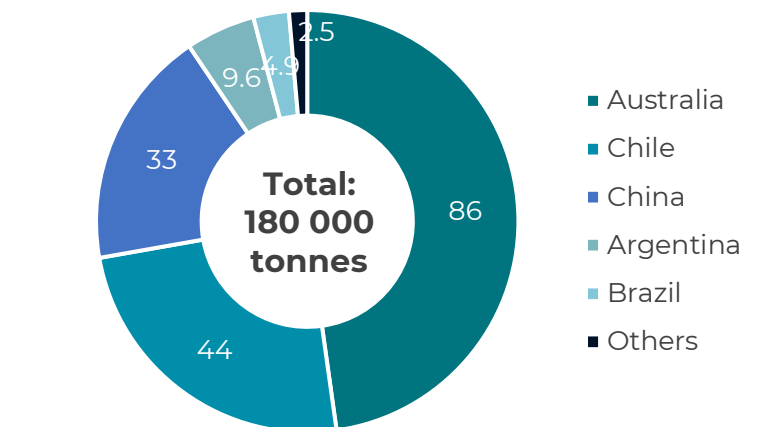


Source: [US Geological Survey](#)

million tonnes

- **Chile** is the global leader in terms of lithium reserves, while **Australia** is the leader in lithium mining production.
- **Kazakhstan** has not conducted any large-scale search for potential lithium reserves yet. The country might hold about 50-100 thousand tonnes of lithium reserves. Kazakhstan's geology services partner with companies from Germany, South Korea, and the UK to explore and develop lithium fields in East Kazakhstan.

**GLOBAL LITHIUM MINE PRODUCTION IN 2023**



Source: [US Geological Survey](#)

thousand tonnes



# LITHIUM – KAZAKHSTAN RESERVES AND PROJECTS

## KAZAKHSTAN'S LITHIUM MINES AND PROJECTS ARE CONCENTRATED IN THE EAST-KAZAKHSTAN REGION



Note: Kazakhstan does not produce and export lithium yet

Kazakhstan might have more deposits than discovered already. **Possible reserves** might be in the Aral Sea region and drying lakes of the Caspian lowland.

Source: [kursiv.media](#), [kazpecgeo.kz](#)

## INVESTMENT PROJECTS

#	Investment project	Investor's country	Region	Project cost, \$million
A.	Construction of a mining and processing plant for the extraction and processing of lithium	Germany	East Kazakhstan region	470
B.	Processing of pegmatite ores to obtain lithium oxide concentrate. Asubulak pegmatite field	Germany	East Kazakhstan region	180

Source: [Kazakh Invest](#)

## LITHIUM DEPOSITS IN KAZAKHSTAN:

1. Yubileynoe
2. Verkhne-Baymurzinskoye
3. Bakenny
4. Akhmetkino
5. Medvedka
6. Akhmirovskoy

In March 2024, it was announced that Korean Institute of Geoscience and Mineral Resources discovered a new lithium deposit with a grade of 5.3% in East Kazakhstan. It may be worth \$15.7 billion.

In April 2024, Rio Tinto initiated exploration for lithium in East Kazakhstan.

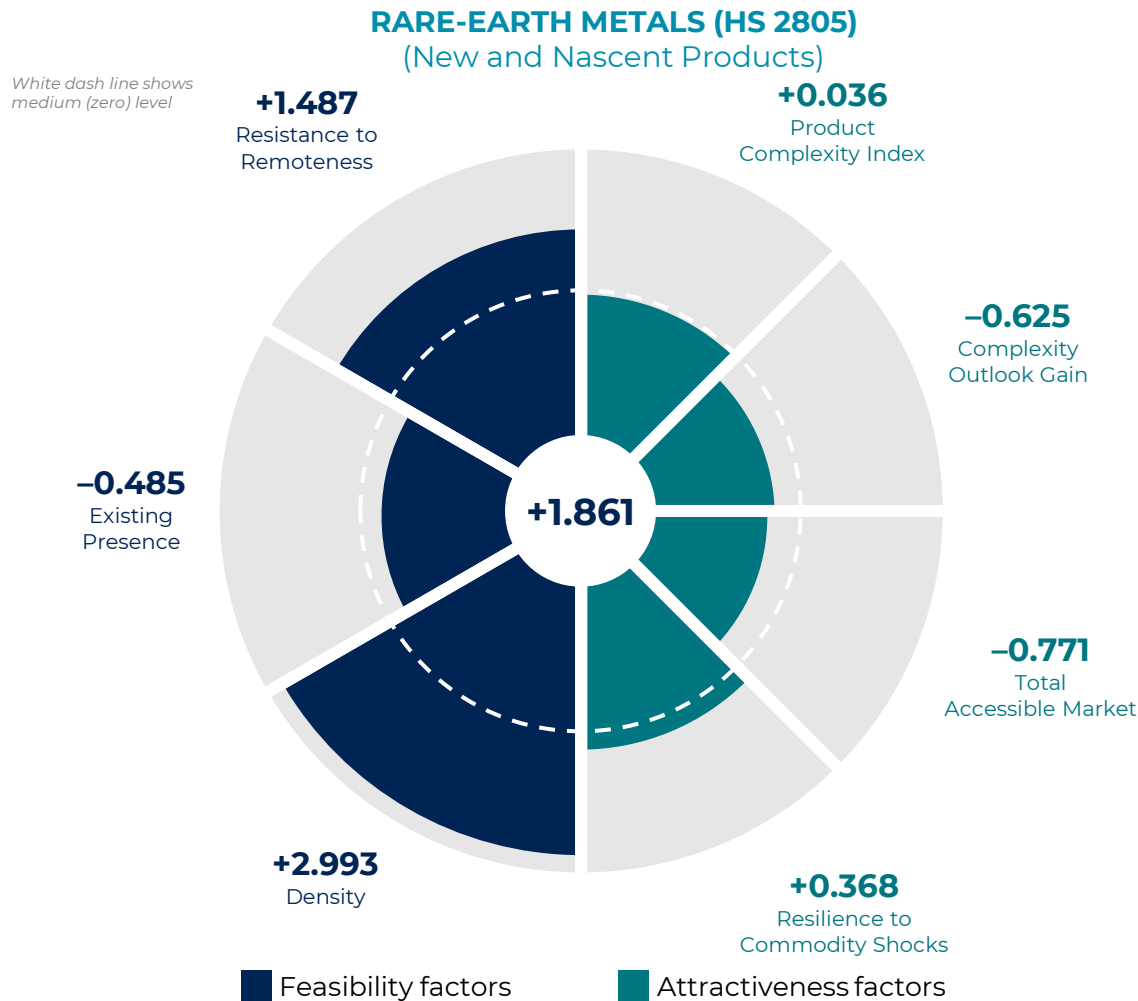
# 8. RARE-EARTH METALS



# RARE-EARTH METALS (REM) (HS 2805)

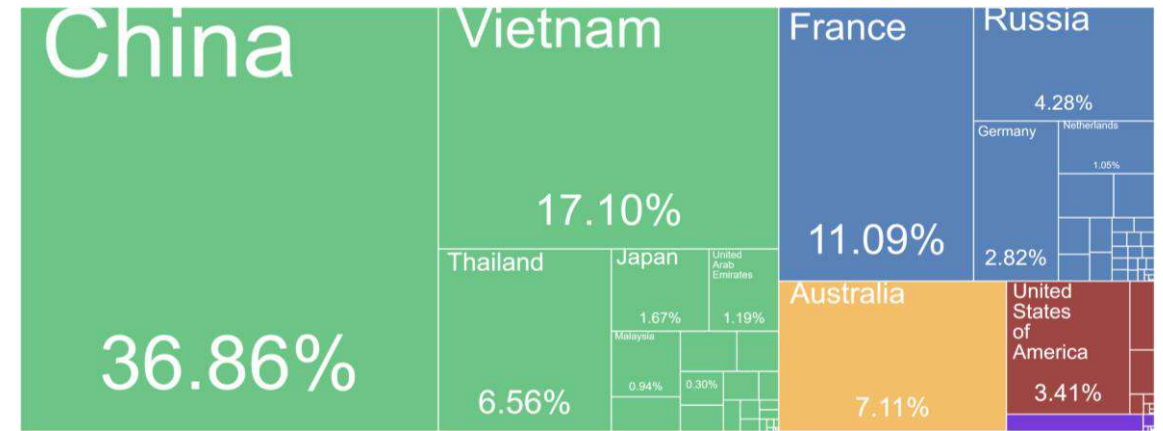
- REM has an average product complexity index and a small total addressable market. REM is moderately resilient to oil shocks and opens limited opportunities for diversification in higher complexity in future. There are some existing presence that might be a basis for export expansion, and high density shows comparative easiness to diversify into REM production for Kazakhstan. REM is indifferent to physical distance of export destination.
- Global trade market of REM amounted to \$1.14 billion in 2021. China is the largest exporter with global share of 37%. China has 40% of global REM explored reserves, and accounts for 69% of global REM mining and 85% of global REM refining facilities. Currently, China is the only export destination of Kazakhstan's REM.
- Kazakhstan experienced a 4.6-fold increase in REM exports since 2020 in dollar terms, and a 3.8-fold increase in REM exports since 2020 in real terms.
- In the recent 9 months, Kazakhstan announced plans on cooperation on REM exploration, mining, refining, and exporting with companies from Germany, the United States, the United Kingdom, China, Singapore, and others.
- In December 2023, Kazakhstan adopted a Complex Plan on rare metals and REM for 2024-2028. According to the document, Kazakhstan is planning to invest KZT 2.4 billion (~\$5.3 million) in the development of rare metals and REM in 2024-2028. In May 2024, the Senate of Kazakhstan declared that potential resources of rare metals and REM of Kazakhstan might include about 5 000 deposits worth \$46 trillion.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT



## SHARES OF EXPORTERS IN THE GLOBAL REM MARKET, 2021

Total global market in 2021 is \$1.14 billion



Kazakhstan's share in global exports is less than 0.01%

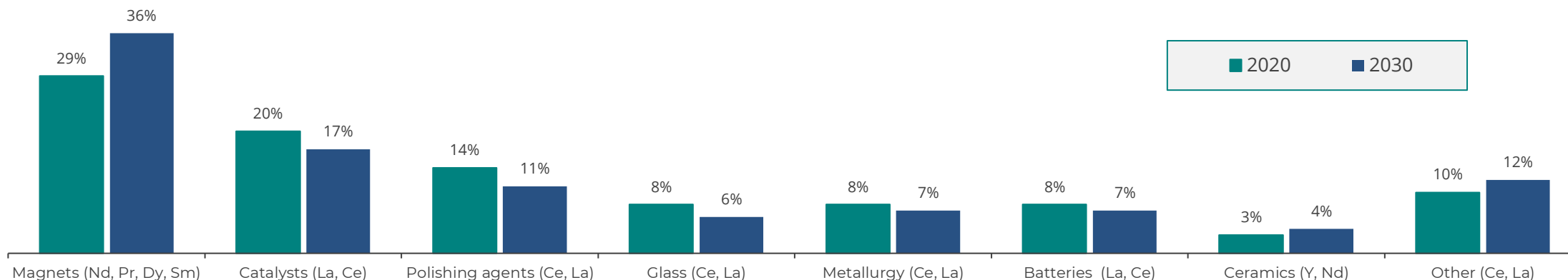
### HS codes:

- 280511 Sodium
- 280512 Calcium
- 280519 Alkali or alkaline-earth metals (excl. sodium and calcium)
- 280530 Rare-earth metals, scandium and yttrium
- 280540 Mercury

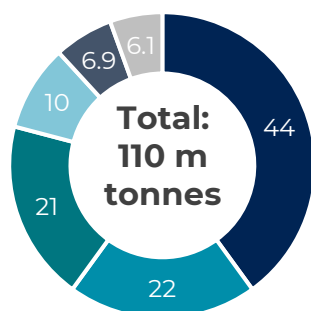
Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

# REM – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

GLOBAL DEMAND FOR RARE EARTH OXIDE IS AND WILL BE LED BY MAGNETS, CATALYSTS AND POLISHING AGENTS  
(share of demand)



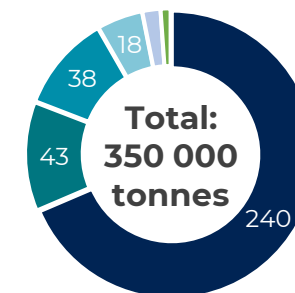
GLOBAL REM RESERVES (2023)  
(in million tonnes)



■ China    ■ Vietnam    ■ Brazil  
■ Russia    ■ India    ■ Others

- Global REM market is dominated by **China**
- China** is the largest exporter with global share of 37%. China has around 40% of global REM explored reserves, and accounts for 69% of global REM mining and 85% of global REM refining facilities.

GLOBAL REM PRODUCTION (2023)  
(in thousand tonnes)



■ China    ■ US    ■ Myanmar  
■ Australia    ■ Thailand    ■ Others

# REM RESERVES OF KAZAKHSTAN

70% OF REM RESERVES ARE IN MANGYSTAU REGION

## 1 West Kazakhstan

- Kyzylsai
- Borsyksai
- Melovoye
- Shilisai
- Shpakovka
- Tomak
- Taibogar
- Tasmuryn

## 2 Central Kazakhstan

- Kuyrektykol
- Karatas 4
- Shubarkol
- Zhilanshik

## 3 South Kazakhstan

- Balasauyskandyk
- Koksay
- Kurumsak
- Zhabagly
- Karatau
- Akdala
- Mynkudyk
- North Karamuryn

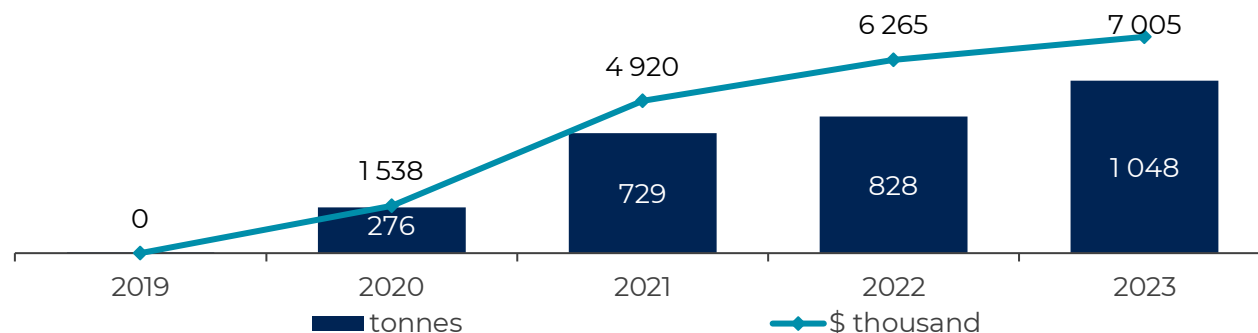
## 5 North Kazakhstan

- Krasnomayskoye
- Losevskoye
- Kundybay
- Obukhovskoye
- Karaagash
- Akbulak
- Gorkovskoye
- Bogoduhovskoye
- Tobolskoye
- Koskol
- Tleumbet
- Talairyk

## 4 East Kazakhstan

- Upper Espe
- Arshaly
- Yubileinoye
- Karaotkel

KAZAKHSTAN'S EXPORTS (HS codes 280530 & 284690)



4.6x

Increase in REM exports of Kazakhstan since 2020 in dollar terms

3.8x

increase in REM exports of Kazakhstan since 2020 in real terms

100%

Share of China in Kazakhstan's exports (2023)

0.83%

Share of Kazakhstan in global exports of REM ores \$590 m (2021)

Sources: *USGS, Mining Programme of Kazakhstan, Financial Times, Complex Plan on Rare Metals and REM for 2024-2028, Bureau of National Statistics of Kazakhstan, Deposits of rare metals and rare earths in Kazakhstan (Almaty, 1998 -102 p), Concept of Geology of Kazakhstan*

# CURRENT PRODUCERS AND RECENT DEVELOPMENTS IN KAZAKHSTAN

**2.4**  
BILLION KZT

Expected budget spending on the development of rare metals and REM in 2024-2028

**11**

Processes for exploration of REM reserves

**2.2**  
MILLION SQ. KM

Area of geological coverage by 2026, with a particular focus on rare metals and REM

## RECENT DEVELOPMENTS:

- In November 2022, MoU between Kazakhstan and the EU was signed during COP27, establishing a partnership on raw materials for batteries and renewable hydrogen.
- In June 2023, an agreement on rare metals was signed between Creada Corporation (Kazakhstan) and HMS Bergbau AG (Germany) aimed at exploration, mining, and processing of critical minerals in East Kazakhstan. Creada Corporation is owned by KAZ Lithium Ltd, a company registered at the AIFC.
- In September 2023, President Tokayev announced that the geological coverage will be increased from 1.5 million km<sup>2</sup> to 2.2 million km<sup>2</sup> by 2026, with a particular focus on REM.
- In September 2023, it was announced that the C5+1 Critical Minerals Dialogue would be launched by the US and Central Asian countries.
- In December 2023, Kazakhstan adopted Complex Plan on rare metals and REM for 2024-2028. According to the document, Kazakhstan is planning to invest KZT2.4 billion (~\$5.3 million) on the development of rare metals and REM in 2024-2028.
- In March 2024, Kazakhstan and the United Kingdom signed a roadmap for REM exploration and mining.
- In April 2024, Cove Capital (US) and Tau-Ken Samruk (Kazakhstan) announced about plans on joint exploration in Kostanay region.
- In May 2024, President Tokayev declared that Kazakhstan and Singapore are to cooperate in REM mining and exporting.
- In May 2024, the Senate of Kazakhstan declared that potential resources of rare metals and REM of Kazakhstan might be about 5 000 deposits worth \$46 trillion.

Sources: [EU](#), [Kazakh Invest](#), [US Embassy](#), [Kursiv](#), [Akorda](#)

## REM PRODUCERS IN KAZAKHSTAN

1 Kazatomprom



2 Kazakhmys



3 Kazzinc



4 Tau-Ken Samruk



5 Titanium Magnesium Plant



6 Ulba Metallurgical Plant



7 Irtysh Rare Earth Co. Ltd



8 SARECO LLP



9 Dinatron Kazakhstan LLP



Sources: [Metal Mining](#), [Metal Mining](#)

# SPECIFIC PRECIOUS METAL





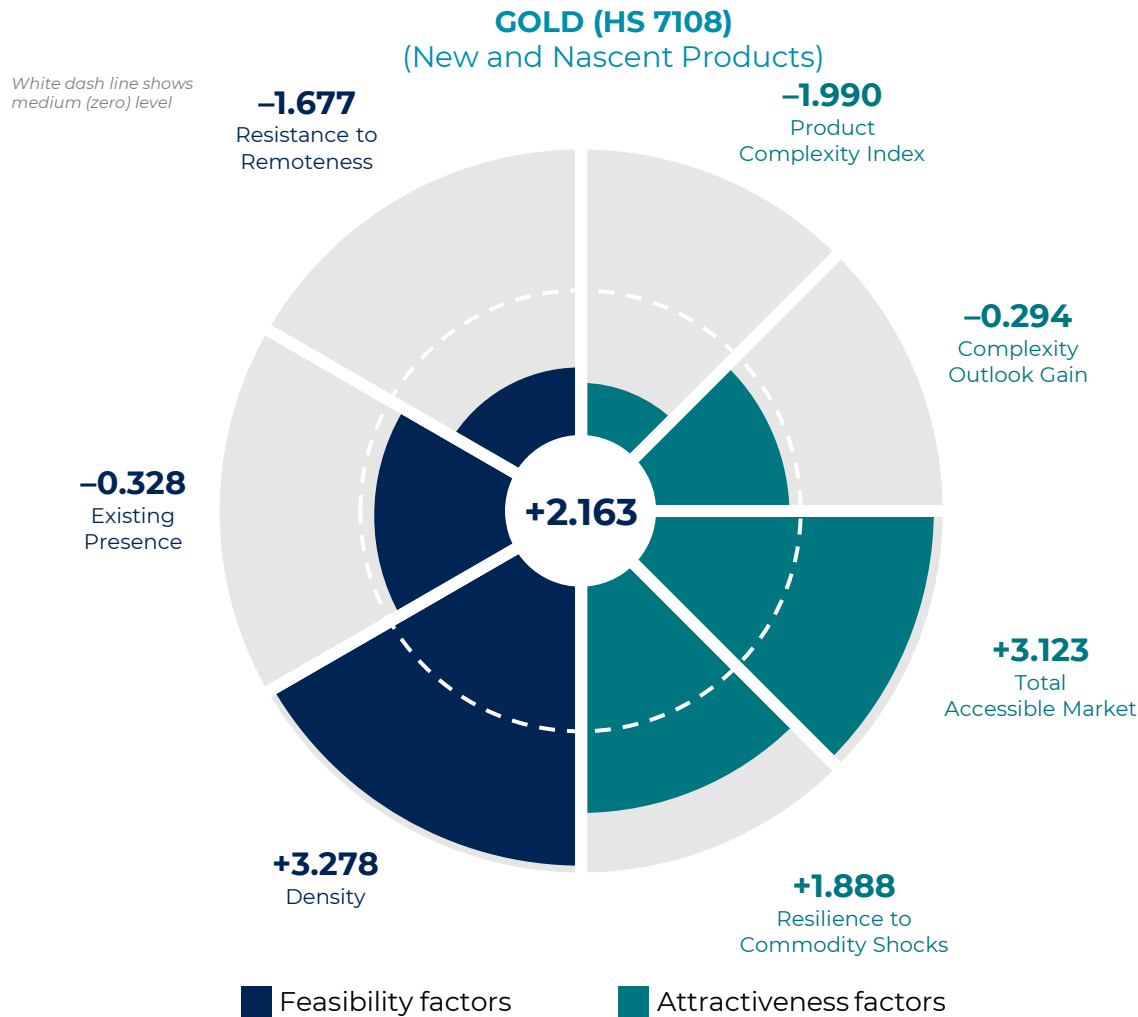
# 9. GOLD



# GOLD (HS 7108)

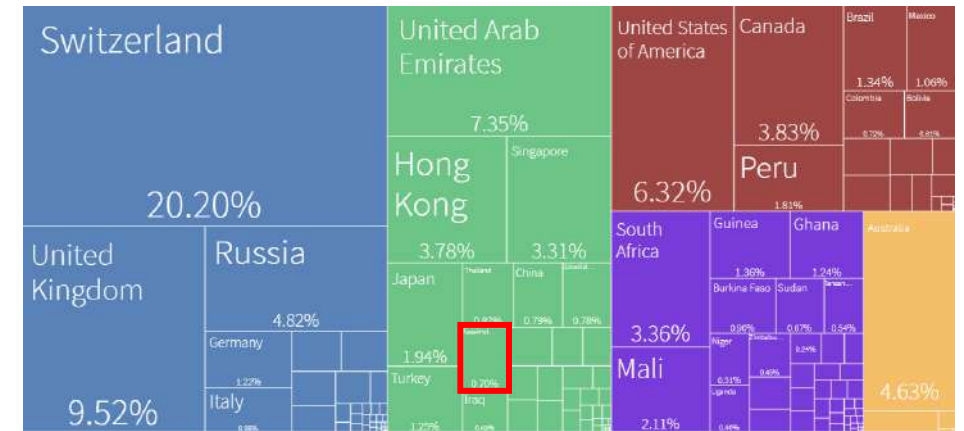
- Since gold is the major precious metal, it has a special status and special exports conditions. It may disrupt trade statistics of gold as a metal good. Particularly, largest global exporters of gold are Switzerland (20%), the United Kingdom (9.5%), the UAE (7.4%), the United States (6.3%), and Hong Kong (3.8%).
- Even though Kazakhstan had the 14th largest reserves in the world and the 7th largest gold mine production in 2022 (according to the USGS), according to official statistics, Kazakhstan's share in the global exports is less than 1%.
- Kazakhstan's share in the global exports of gold classified this metal as new or nascent product for exporting in the Economic Complexity Report, however the accumulated know-how and experience of Kazakhstan in gold mining and the country's position in terms of reserves forced to single out gold from new and nascent product into its own section of the Overview.
- Gold has a very low product complexity index, but a very large total addressable market. Gold is highly resilient to oil shocks and opens average opportunities for diversification in higher complexity in future. There are some existing presence that might be a basis for export expansion, and high density shows comparative easiness to diversify into gold exports for Kazakhstan. Gold is very sensitive to physical distance of export destination.
- The World Gold Council expects gold prices to decline two years. For the last 10 years, the global annual demand for gold is stable around 4.4 thousand tonnes.

# RESULTS OF THE ECONOMIC COMPLEXITY REPORT



## SHARES OF EXPORTERS IN THE GLOBAL GOLD MARKET, 2021

Total global market in 2021 is \$427 billion



Kazakhstan's share in global exports – 0.7%

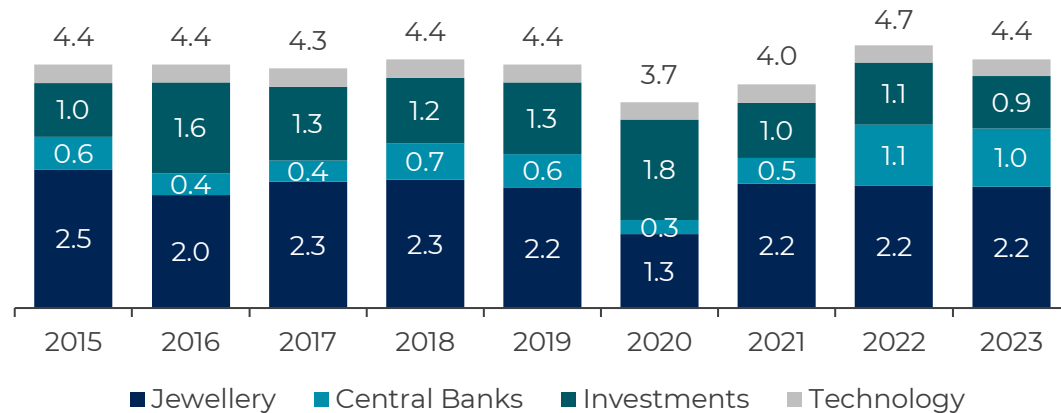
### HS codes:

- 710811 Gold powder
- 710812 Gold unwrought
- 710813 Gold semi-manufactured

Sources: *Industry Targeting Dashboard*, *Atlas of Economic Complexity*

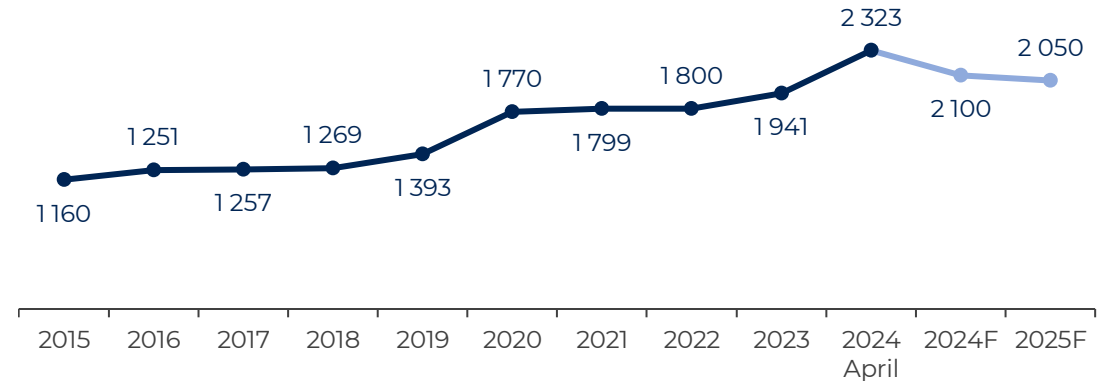
# GOLD – GLOBAL DEMAND, PRICE, RESERVES, PRODUCTION

**TOTAL GOLD DEMAND BY SECTOR, 2015-2023**  
(thousand tonnes)



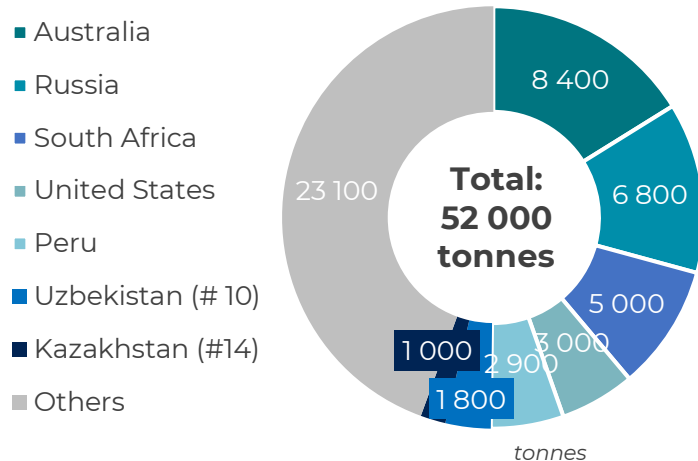
Source: *World Gold Council*

**HISTORIC AND FORECAST GOLD PRICE, 2015-2025** (nominal \$US/ounce)



Source: *World Gold Council*

**GLOBAL GOLD RESERVES IN 2023**



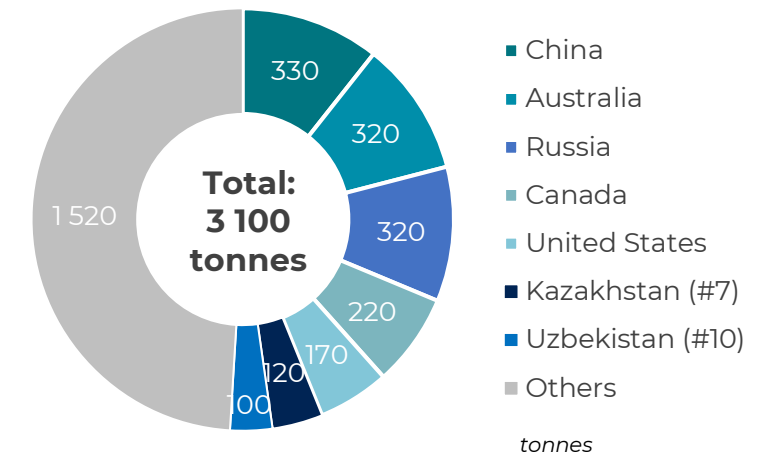
Source: *U.S. Geological Survey*

- **Australia** is the global leader in terms of gold reserves, while **China** is a leader in gold production.
- In 2022, Kazakhstan had the **14<sup>th</sup> largest** reserves in the world with 1,000 tonnes and the **7<sup>th</sup> largest gold mine production** with 120 tonnes.

Note: Total global supply in 2023 was 4,900 tonnes, which includes recycled gold (about 25% of total supply).

Source: *World Gold Council*

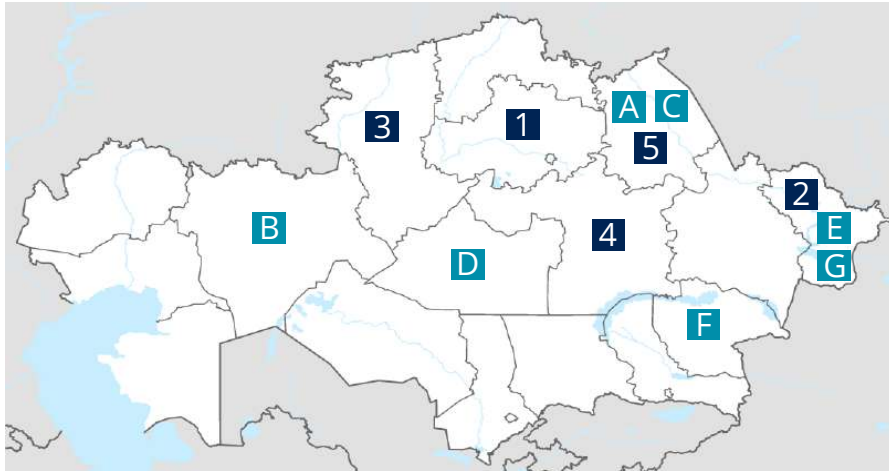
**GLOBAL GOLD MINE PRODUCTION IN 2023**



Source: *U.S. Geological Survey*

# GOLD – KAZAKHSTAN PRODUCTION

## KAZAKHSTAN'S GOLD MINES AND PROJECTS MAP



## LARGEST GOLD MINES

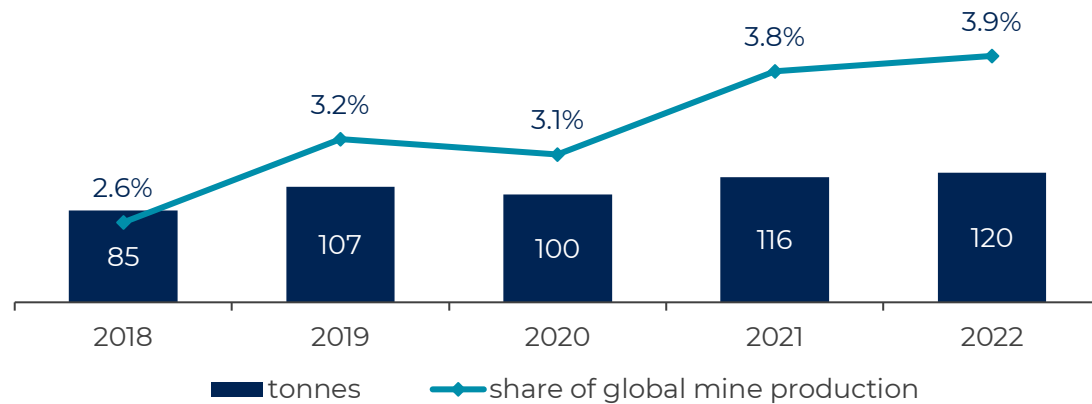
- (2022):
1. Altyntau Kokshetau (395 thousand ounces), Glencore
  2. Kyzyl Project (330 thousand ounces), Polymetal Int.
  3. Varvara Mine (211 thousand ounces), Polymetal Int.
  4. Abyz Mine (135 thousand ounces), Kazakhmys
  5. Bozshakol Mine (122 thousand ounces), KAZ Minerals

Source: [mining-technology.com](http://mining-technology.com)

#	Investment project	Investor's country	Region	Project cost, \$million
A.	Processing of gold-containing concentrates	USA	Pavlodar	685
B.	Processing and enrichment of precious metals (Gold and others)	Kazakhstan	Aktobe	240
C.	Construction of a gold recovery factory	Kazakhstan	Pavlodar	23
D.	Construction of a processing complex at the Ashiktas mine	Kazakhstan	Ulytau	22
E.	Modernization at the existing enterprise DSOO "Baur Gold"	Kazakhstan	East Kazakhstan	18
F.	Construction of a mining and metallurgical complex for gold ores	Kazakhstan	Zhetisu	4.4
G.	Construction of a hydrometallurgical plant for the production of cathode gold	Kazakhstan	East Kazakhstan	1.8

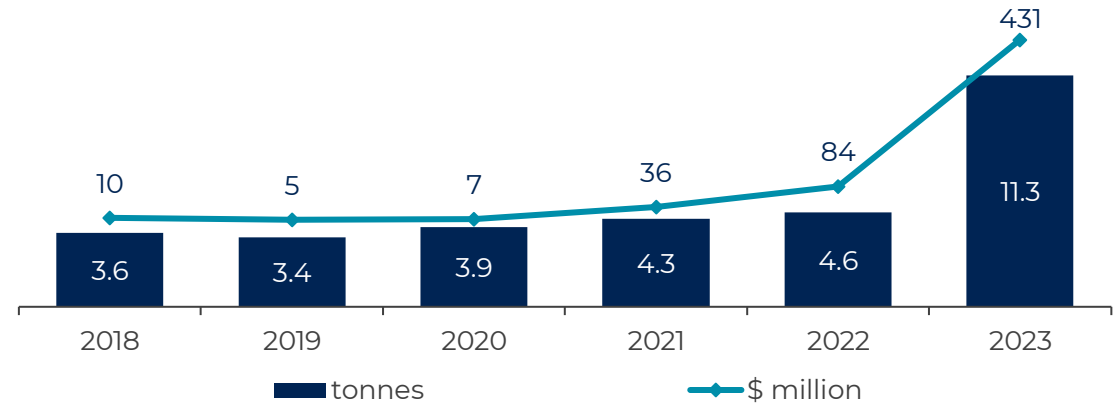
Source: [Kazakh Invest](http://Kazakh Invest)

## KAZAKHSTAN'S GOLD MINE PRODUCTION AND SHARE GLOBALLY



Source: [U.S. Geological Survey, Mineral Commodity Summaries](http://U.S. Geological Survey, Mineral Commodity Summaries)

## KAZAKHSTAN'S EXPORTS



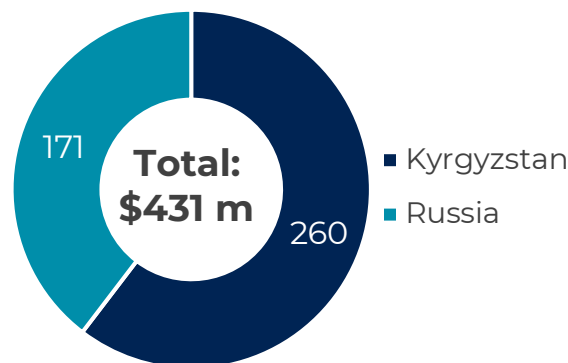
Source: [Kazakhstan's Bureau of National Statistics](http://Kazakhstan's Bureau of National Statistics)

# KAZAKHSTAN'S SHARE IN THE GLOBAL EXPORTS OF GOLD MINES IS 0.7%

## KAZAKHSTAN'S TOP GOLD IMPORTERS, 2022

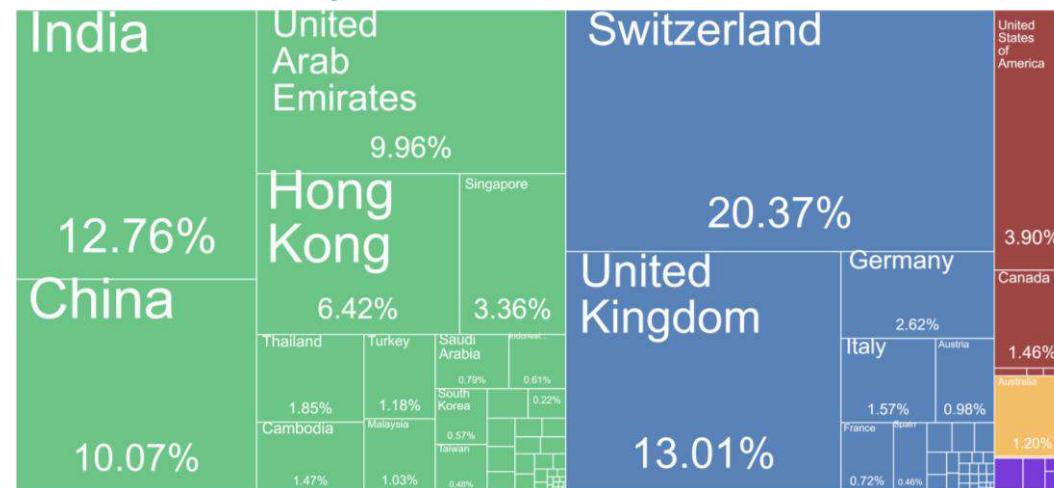
Kyrgyzstan and Russia constitute almost 100% of Kazakhstan's gold exports in 2022.

Russia and Kyrgyzstan both have a share of around 0.03% in global imports.



## SHARES OF IMPORTERS IN THE GLOBAL GOLD MARKET, 2021

Total global market in 2021 is \$427 billion



Russia 0.02%, Kyrgyzstan 0.01%

## KYRGYZSTAN'S GOLD IMPORTS IN 2022 WERE \$25.7 M



## RUSSIA'S GOLD IMPORTS IN 2022 WERE \$78.2 M



Sources: for shares of global importers and global market – *The Atlas of Economic Complexity (harvard.edu)*, as of 2021, the latest available for imports trade data in money terms – *UN Comtrade*, as of 2022, the latest available for 2022 Kazakhstan's importers – *Kazakhstan's Bureau of National Statistics*

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