

# S&P Global Ratings

## Environmental, Social, And Governance Evaluation

# Kazatomprom

### Summary

National Atomic Co. Kazatomprom JSC (Kazatomprom) is the world’s largest producer of natural uranium, with a market share of 24% in attributable production. Its mining operations are in Kazakhstan where the company benefits from access to the world’s largest uranium reserve base (up to 350,000 tons) and a low-cost position (bottom quartile on the global curve). In first-half 2022, it generated revenue of about Kazakhstani tenge (KZT) 494 billion and S&P Global Ratings-adjusted EBITDA of KZT244 billion (equivalent to \$1.1 billion and \$540 million, respectively).

Kazatomprom is also involved in rare minerals mining, uranium processing, and fuel pellet and fuel assembly production at its UMP subsidiary, though these segments made up just 8% of 2021 revenue. The company has about 20,000 employees. Kazatomprom is majority state-owned through the 75% stake controlled by the National Welfare Fund Samruk-Kazyna JSC, with the remaining 25% in free float.

Our ESG Evaluation of 51 on Kazatomprom reflects the mining industry's significant exposure to environmental and social risks as well as the company's effective ESG management practices, primarily due to the highly regulated nature of its operations. The company is better positioned than its wider mining sector peers, in our view, thanks to its use of in situ recovery (ISR), one of the least disruptive methods of mining. The evaluation also reflects the company’s contribution to global decarbonization efforts in its downstream value chain, since it is one of the main producers of uranium, which is used to power nuclear reactors that produce low-carbon electricity. In terms of social performance, we believe that the company manages its safety and workforce risks in line with industry practices. Finally, its governance practices are broadly in line with local standards.

Kazatomprom has a strong position in the uranium market. Management is well aware of risks and opportunities the company might face given its exposure to nuclear power and the regional geopolitical situation. It puts a strong emphasis on environmental and health and safety issues given the industry’s inherent exposure.

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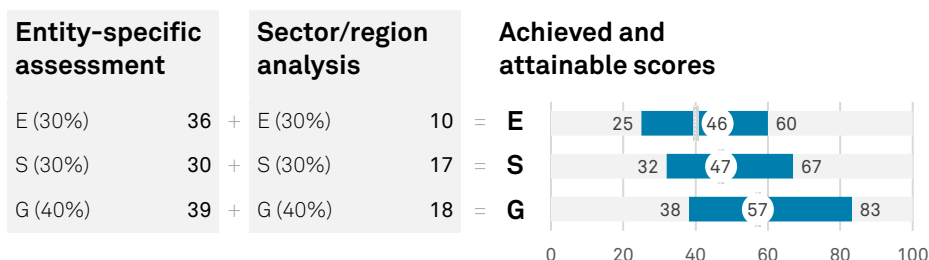
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### ESG Profile Components (figures subject to rounding)



Entity within its primary sector/region

Entity's sectors/ regions versus all sectors/ regions

Min and max scores possible given sectors/regions. The gray line represents performance in line with industry standards.

### ESG Profile 51


















#### Preparedness No Impact



A higher score indicates better sustainability. Figures subject to rounding.

# Component Scores

Environmental Profile			Social Profile			Governance Profile		
Sector/Region Score	10/50		Sector/Region Score	17/50		Sector/Region Score	18/35	
 Greenhouse gas emissions	Good		 Workforce and diversity	Good		 Structure and oversight	Good	
 Waste and pollution	Good		 Safety management	Good		 Code and values	Developing	
 Water use	Good		 Customer engagement	Good		 Transparency and reporting	Strong	
 Land use and biodiversity	Good		 Communities	Good		 Financial and operational risks	Neutral	
 General factors (optional)	6		 General factors (optional)	None		 General factors (optional)	None	
Entity-Specific Score	36/50		Entity-Specific Score	30/50		Entity-Specific Score	39/65	
E-Profile (30%)	46/100		S-Profile (30%)	47/100		G-Profile (40%)	57/100	
<b>ESG Profile (including any adjustments)</b>						<b>51/100</b>		

## Preparedness Summary

Kazatomprom has an adequate preparedness profile, playing a strategic role in the global uranium market and being an important part of global decarbonization efforts through the nuclear energy value chain. The company's 2021-2028 development strategy emphasizes its focus on uranium mining as the core business activity strengthened by improved efficiency and expanded sales channels. The board discusses industry trends on the regular basis and therefore is well aware of potential risks inherent in the region and industry, namely public opinion regarding the nuclear industry, environmental and health and safety concerns, the geopolitical situation, and social unrest in Kazakhstan.

### Capabilities

Awareness	Good
Assessment	Good
Action plan	Good

### Embeddedness

Culture	Developing
Decision-making	Good

## Preparedness Opinion (Scoring Impact)

**Adequate (No Impact)**

## ESG Evaluation

**51**

Note: Figures are subject to rounding.

# Environmental Profile

46/100

## Sector/Region Score (10/50)

The mining sector is highly exposed to environmental risks due to the release of toxic pollutants to air and water and from the energy and water intensity of ore processing. The uranium value chain is additionally exposed to radioactive waste from spent fuel rods in nuclear power reactors and the release of radioactive vapors from potential containment failures.

## Entity-Specific Score (36/50)

Note: Figures are subject to rounding.



**Compared with the wider mining industry, Kazatomprom is less exposed to direct operational environmental risks due to its exclusive use of ISR.** ISR entails the use of wells to leach uranium from orebodies located in underground aquifers. This reduces the potential for land disturbances, water withdrawals, tailings, and pollution since the mineral is left in the ground.

**Kazatomprom’s exposure to waste and pollution is managed in line with industry standards, national regulation, and international best practices, as defined by the International Atomic Energy Agency (IAEA).** The prevention and mitigation of its key risk, namely groundwater pollution from acid leaching, is built into the design and operation of ISR mines with the inclusion of monitoring wells and by injecting less water than is pumped out to maintain water balance. This water is then stored in evaporation ponds and residues are disposed of by third parties. We view positively Kazatomprom’s R&D project to develop a low-acid leaching technology using cavitation jets and special-purpose chemicals, since this decreases sulphuric acid consumption by 20% and reduces the potential risk further. As per IAEA recommendations, in 2021 Kazatomprom started to assess its environmental impacts on territories within a 10-kilometer radius of its operations as part of its Environmental and Social Action Plan. The study concluded that all indicators were in line with natural background values, though we note that stronger peers have longer track records in conducting such assessments. Moreover, despite being low relative to mining peers, total air pollution increased 8% between 2020-2021 to the highest it has been since 2018 due to construction activities. Finally, there have been no significant pollution incidents to date.

**Despite its nascent decarbonization strategy, Kazatomprom plays a key role in the energy transition by providing the raw material needed to operate nuclear power reactors.**

Kazatomprom’s decarbonization strategy targets neutrality for scope 1 and 2 emissions by 2060, in line with the Kazakh government’s plan and that of stronger peers. To reduce scope 2 emissions (2021: 51% of total scope 1, 2, and 3 emissions), Kazatomprom undertakes energy-efficiency initiatives identified during energy audits, uses renewable energy (1% total energy in 2021), and will undertake an offsetting program until 2040. We consider the latter to be weaker practice, since it does not lead to actual reductions. Additionally, despite contributing 43% to total emissions, Kazatomprom has yet to make efforts to reduce its scope 3 emissions.

**Kazatomprom’s exposure to water, land use, and biodiversity is minimized by the wells, closed loop systems, and restoration activities inherent to ISR mining.** Kazatomprom’s water abstraction is regulated by permits, and it does not operate in or adjacent to protected areas of biodiversity. However, Kazatomprom does not currently assess its water scarcity and water risks, nor does it actively engage in biodiversity improvements beyond regulatory requirements, which stronger peers undertake.

# Social Profile

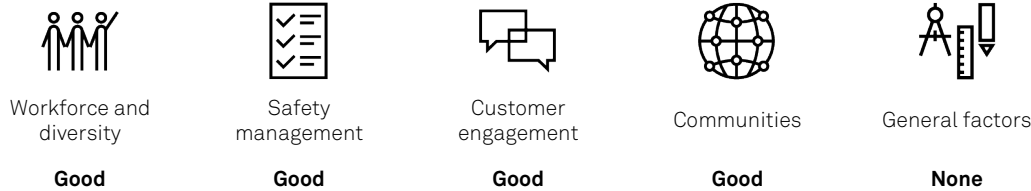
47/100

## Sector/Region Score (17/50)

The mining sector is significantly exposed to social risks, in terms of employee safety, community safety, low diversity, and high unionization. In some areas, human rights violations are common. Uranium mining and processing is also exposed to value chain safety concerns from the use of radioactive material in nuclear power reactors.

## Entity-Specific Score (30/50)

Note: Figures are subject to rounding.



**Despite reduced exposure to radium and uranium ore dust from the use of ISR, Kazatomprom employees remain at risk of chemical toxicity from the buildup of radium in well pipes and during milling and fuel fabrication processes.** Kazatomprom’s occupational radiation safety prevention systems are in line with stringent regulatory requirements and international best practice, as defined by the IAEA. Although the maximum annual effective radiation dose increased by 25% between 2020-2021, we note that the figure remained considerably below the safe limit of 20 millisievert and that Kazatomprom implemented remedial actions to reduce it. As per IAEA recommendations, Kazatomprom conducts independent radiation assessments in local settlements. To date, no significant radiation events have occurred. Although still currently lower than peers, the lost time injury frequency rate doubled to 0.55 in 2021 and the number of employee fatalities rose to two (from one in 2020). Kazatomprom’s investigation identified road accidents as the primary cause, and it then applied preventative actions, namely the installation of GPS systems, video registrations, and road safety trainings. We could revise downward our safety management assessment to lagging if performance does not improve. Safety metrics for contractors are expected to be published once they have been verified, however we note that stronger peers already disclose such data. Finally, Kazakhstan is a party of the Nuclear Non-Proliferation Treaty as a non-nuclear weapons state. This means that Kazatomprom’s operations are subject to international safeguards and on-site inspections by the IAEA.

**Kazatomprom seeks to develop strong ties with the communities in which it operates to ensure their sustainable development and maintain open dialogue.** This includes close communication about environmental protection activities, sourcing 80% of supplies locally, and giving preference to local candidates during recruitment (in 2021: 81%, 2022: 90%). Kazatomprom’s supply chain due diligence process is still nascent, as its supplier code of conduct was launched in 2021 and compliance assessments are set to take place once supplier training has been completed.

**Kazatomprom aims to improve its workplace culture by promoting diversity and professional development.** Kazatomprom’s diversity strategy is in its early stages and focused on increasing the proportion of women in top management to 30% by 2023 (2021: 9%) through mentorship and trainings programs. In addition to mandatory trainings on topics such as safety, Kazatomprom has introduced a system to identify the training needs and future career opportunities of employees as well as an internal management succession program. Additionally, similarly to stronger peers, 94% of the total workforce is covered by collective bargaining agreements.

**Kazatomprom has access to 69% of uranium resources in Kazakhstan (8% of global identified resources), securing its long-term global market position (2021: 24% market share).** We view positively its diversified customer portfolio, located mainly in China, the U.K., the U.S., and Canada.

# Governance Profile

57/100

## Sector/Region Score (18/35)

Kazatomprom is headquartered in Kazakhstan. The country's corporate governance practices lag global best practices and corruption is perceived as high, but is broadly in line with regional peers'.

## Entity-Specific Score (39/65)

Note: Figures are subject to rounding.



Structure and oversight

Good



Code and values

Developing



Transparency and reporting

Strong



Financial and operational risks

Neutral



General factors

None

**Kazatomprom's governance system is in line with local norms.** The board is composed of three independent directors (42%), three representatives of the main shareholder, and the CEO. The majority shareholder is Samruk Kazyna, a sovereign wealth fund that holds 75% of shares and acts only through the institute of the board of directors. During the general meeting of shareholders, board members are elected based on their competencies, skills, achievements, business reputation, and professional experience. The board has a separate non-executive and independent chairman and CEO, which we view as a strong feature. There are four board committees (production safety, audit, strategic planning and investment, nomination and remuneration) all chaired by the independent directors. The board is geographically diverse, with the independent directors from the U.K., Australia, and the U.S. Its skill set is skewed toward financial, audit, international relationship backgrounds, with only few members having industry skills and only one having sustainability experience. The company recognizes this is missing and is working on providing trainings to board members and top management on material ESG topics. In terms of gender diversity, the board has currently only one female representative (14%). However, in the composition of a new board in 2023, the company is planning to comply with the Presidential decree of the Republic of Kazakhstan, which stipulates that by 2023 the share of women on the board of directors should be no less than 20%.

**Kazatomprom has established policies and procedures to address topics ranging from health and safety to corruption, but is still working to fully implement them across all operations and supply chain.** The company has a number of policies underlying its anticorruption and antibribery efforts, including an anti-corruption and anti-fraud policy, whistleblowing policy, and code of ethics and compliance. Kazatomprom conducts regular compliance and anti-corruption training sessions for employees and recently launched a program for training vendors on ethical principles. It also has appropriate whistleblowing channels handled by the third party, which we view as a good practice. However, we note the company has a track record of fraud investigations. Management's remuneration is composed of a fixed salary (28%) and variable annual cash payment (72%). Currently, there is no long-term incentive plan that is often used to motivate executives to ensure the long-term values of a company, which we view as a weaker practice. CEO's remuneration is partly linked to ESG indicators--such as lost time injury frequency rate, greenhouse gas emissions, and average irradiation dose of Group "A" personnel--which cover the company's material ESG areas. However, there is limited disclosure on the structure of management's remuneration.

**Kazatomprom has strong reporting practices compared to its local peers, and its public disclosure covers financial and nonfinancial metrics.** The company's disclosure follows the Global Reporting Initiatives (GRI) and provides the GRI content index. Its report has an independent limited assurance.

# Preparedness Opinion

**Adequate**  
(No Impact)

## Preparedness

Low

Emerging

Adequate

Strong

Best in class

**Kazatomprom has an adequate preparedness profile, playing a strategic role in the global uranium market and being an important part of the decarbonization effort through the nuclear energy value chain.** The company's 2021-2028 development strategy emphasizes its focus on uranium mining as the core business activity strengthened by improved efficiency and expanded sales channels. The board discusses industry trends on the regular basis and therefore is aware of potential risks inherent to the region and industry, namely public opinion regarding nuclear industry, environmental and health and safety concerns, geopolitical situation, and social unrest in Kazakhstan.

**Kazatomprom's business model depends on the nuclear energy industry, which we view as stable for the next decade at least.** The company's core activity is to mine uranium used to power nuclear reactors that produce electricity. Nuclear generation is one of the least carbon-intensive ways to produce power. Therefore, its role in several countries' energy transition plans has returned to prominence. It is considered an EU taxonomy eligible asset, although as a transition activity and under stringent conditions to ensure that they do not significantly harm the other EU environmental objectives. Although, according to S&P Global Commodity Insights' forecasts, the share of nuclear generation in Europe and the U.S. will likely decrease to about 15% of power generation by 2035, its share in China, Kazatomprom's main customer, is increasing and could reach 145 gigawatts of operation nuclear capacity, accounting for 10% of power generation by 2035. The company also closely monitors emerging technologies, such as hydrogen for example, that can substitute nuclear in future and is ready to adapt operations in case there are any technological disruptions. However, at the moment, the company does not consider this a material risk, since currently available technologies have yet to be matured to be used at scale.

**The company has a narrow focus on uranium mining, but with a well-diversified customer base.**

Based on a strategy laid out by an external consultant, the company has adopted a 10-year plan to help it become the largest uranium producer with a competitive advantage of the low selling price. In parallel, the company follows global market demand to see if there is potential to diversify in other parts of the nuclear fuel cycle such as conversion or enrichment. Kazatomprom has also rare metals assembly, which can scale if the market conditions are favorable. At the same time, Kazatomprom increased the number of its direct clients threefold since its IPO in 2018. Currently, it is targeting all potential users even if they have only one reactor and not focusing on big customers. This results in well-balanced geographic diversification of customers, with China, North America, and Europe each making up about 30%. We believe this improves the company's resilience to a variety of geopolitical risks.

**Kazatomprom is heavily exposed to geopolitical risks based on its location and business links with Russia and China.**

About 30% of Kazatomprom's revenue is generated from supplies to China, which might come under pressure if the geopolitical tensions materially rise, although this is not in our base case. Also, Kazatomprom has uranium mining joint ventures with the State Atomic Energy Corporation Rosatom, which is a Russian state-owned vertically integrated monopoly specializing in nuclear energy. The Russian uranium industry has not been sanctioned by the U.S. or EU so far, and we think it is unlikely to happen given the importance of uranium and Rosatom's products and services for the global nuclear industry. However, if sanctions materialize, it might have material financial implications for Kazatomprom. For instance, the company's primary transportation route goes through the port of St. Petersburg and potentially could be affected if the situation worsens. In addition, Kazatomprom has close operational ties

## Preparedness

with Rosatom in further processing and enrichment of the mined uranium. To mitigate these risks, Kazatomprom has been developing a few contingency plans including the transportation through an alternative Trans-Caspian International Transport Route, though this might result in higher transportation expenses. Kazatomprom also has a certain amount of product stocks at Western converters that can be used if necessary or can apply swap deals with Chinese counterparties followed by receipt of production at Western converters.

**Finally, the company has a strong focus on environmental and health and safety risks, given the industry's inherited exposure, and is working toward improving its corporate culture.** The board emphasize the importance of transparency, diversity, and learning through development programs, workshops, and internal communication.

# Sector And Region Risk

Primary sector(s)	Metals and mining
Primary operating region(s)	Kazakhstan

## Sector Risk Summary

### Environmental exposure

Mining inherently threatens the environment and competes with other businesses and communities for water and electricity. It can also release toxic elements into the air, water, or soil. Open pit and underground mining involves crushing and treating large amounts of ore, resulting in tailings that can alter ecosystems if not contained properly. Other types of mining like heap leaching use toxic fluids (cyanide or sulfuric acid) that are devastating if leaked into the environment. Alloy production such as steel or aluminium is extremely power-intensive and a heavy air polluter. Steel mills generate significant carbon dioxide, nitrogen oxide, and particular matter that need proper treatment before being released into the open air. Finally, coal-fired power plants are the world's most greenhouse-gas-intensive assets which is why governments are increasingly limiting them and encouraging greener forms of energy.

### Social exposure

Social risks are substantial in the mining sector. Despite efforts to improve conditions, safety risk is still higher than in other sectors, both for employees who work under difficult conditions in many cases and for communities who may be exposed to accidents, and may also face adverse economic consequences when mines close. Both, of course, can have pronounced financial effects and enduring reputational consequences, with the potential to diminish a social license to operate and sometimes the actual removal of a permit. The sector also faces significant workforce issues. Diversity remains low, and high unionization can periodically lead to labor disruptions. In some parts of the world--generally in remote areas with limited workers' rights--human rights violations may be common and require policies and monitoring to prevent; these issues are more relevant for mining operations than for metal production. Finally, given the commoditized nature of the sector, exposure to customer-related risk is relatively low.

## Regional Risk Summary

### Kazakhstan

The political environment in Kazakhstan is centralized and respect for the rule of law and transparency are not assured. Besides legislation, corporate governance best practice is based on the 2005 Code on Corporate Governance, which was adopted by the Council of Issuers and the Council of the Association of Financiers, and amended in 2007. The code applies to all listed companies, and is on a voluntary basis, but its recommendations are fairly high level, and implementation is limited. Overall, governance practices lag international peers. Perceived corruption levels are high, with Kazakhstan ranking 102 of 180 on Transparency International's 2021 Perceptions Corruption Index.



# Related Research

- [“Environmental, Social, And Governance Evaluation: Analytical Approach,”](#) published September 20, 2022
- [“The ESG Risk Atlas: Sector And Regional Rationales And Scores,”](#) published July 22, 2020
- [“Our Updated ESG Risk Atlas And Key Sustainability Factors: A Companion Guide,”](#) published July 22, 2020
- [“How We Apply Our ESG Evaluation Analytical Approach: Part 2,”](#) published June 17, 2020

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